Passage Plan

Instructions for Use

Please save all ECDIS logs (including details log and voyage log) plus user maps & settings on a CD/DVD at the end of every voyage and file with this passage plan!

Section 1 General Information	**Section 2** Voyage appraisal & Planning	**Section 3** Publications	**Section 4** Tides and Currents
Section 5 Weather Conditions	**Section 6** Reporting details	**Section 7** Bridge Team Management	**Section 8** ISPS
Section 9 Environmental	**Section 10** Contingencies	**Section 11** Dep Port - Passage from Berth to Pilot Station	**Section 12** Dep Port - Passage from Pilot to Pilot
Section 13 A Arrival Port - Passage from Pilot Stn to Berth	**Section 13 B** Arrival Port – Passage from Pilot Station to Anchorage	**Section 13 C** Arrival Port – Passage from EOSP to Anchorage / Drifting in open safe waters	**Additional WP sheet**
Section 14 A UKC Instructions	**Detailed UKC Calculation** 14B Point of least depth at Departure / 14C Intermediate / 14D Point of least depth at Arrival		**Section 14 E** Squat Calculation (short-cut formulae)
		Section 15 : **Master's review**	**Section 16** Minor Last Minute Changes
			Section 17 Post Voyage De-brief of Passage Plan

Sr. No.
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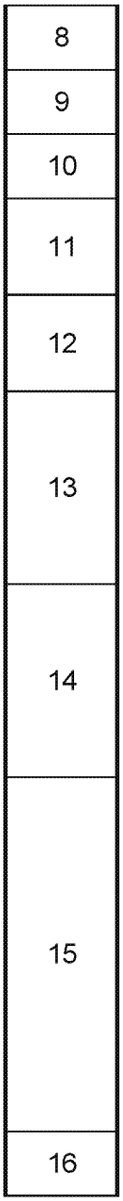
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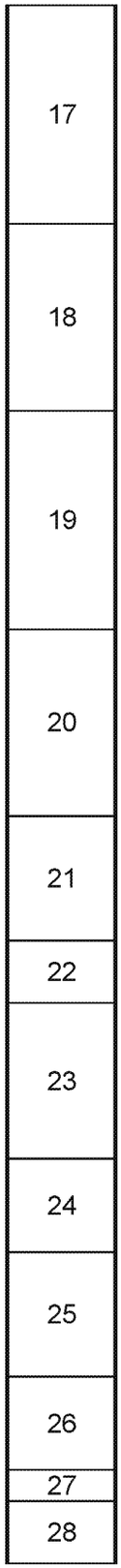
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Instructions for use

Guidelines
As per the requirements of STCW, "Passage Planning" is mandatory and all vessels in our fleet shall comply fully with the requirements in order that safety of navigation is enhanced and the rules are complied with. The Master shall ensure that a plan for the intended voyage is prepared before sailing. The passage plan must be prepared berth to berth for each intended passage including shifting berths within a port using the company's format - ***NAV 1*** . When shifting between berths in a port or between terminals or ports in a river or waterway, only relevant sections of the Passage Plan need to be filled. The voyage should be executed in accordance with the Passage Plan. In the event of any changes to the planned route during the voyage the Passage Plan should be revised and the changes must be made known to all the Watch Officers. Section 16 of the passage plan is to be used to document last minute changes or changes made after the pilot boards. **As many sheets of this Passage Plan have in-built formulae that link with other sheets and a system of generating automatic warning messages, all editable cells should be typed in on a Computer. Some sheets and signatures need to be completed in hand.**
The passage plan must be made prior commencement of the Voyage. Please use a fresh spread sheet for every passage plan. Please save the Master file and rename the file for use. The Passage Plan file is protected so that the formulae may not be inadvertently disturbed while filling in the Passage Plan. The Home page must be used to directly navigate to any sheet of the passage plan. For ease of reference the passage plan is made out in a list of 17 sections. Each section has a button to navigate back to the Home page .
(THIS ROW INTENTIONALLY LEFT BLANK)
Section 1 : This section contains General information which must be filled in prior preparing the plan. Please fill in this section completely prior to filling up the remaining passage plan. Where applicable select the data from the drop down list. The information fed in to this section is directly linked to the other sections, **hence it is very important to complete all parts**. **Please select appropriate means of navigation for the voyage between ECDIS / PAPER CHARTS - this is mainly intended for ships with only one ECDIS that may decide to use paper charts for a voyage due to the lack of adequate ENC coverage. It is however the Company's general policy for ECDIS to be used as primary.**
Section 2: This section is for voyage appraisal and planning on both paper charts and ECDIS. A table for calculating safety depth, contour and height settings for feeding into ECDIS is provided; this table may also be used by vessels navigating on paper charts as a way of determining NO GO AREAS. Also provided are tables for recording planned safety depth settings and 'look-ahead' values at different stages of the voyage.
Section 3: This section must contain information of publications in use for the present voyage . Please use the drop down menu for selecting applicable Voyage publications only. Please fill in the required data in the shaded cells for the latest edition, the edition on board and corrected up to NTM No. **Where the drop down Menu does not contain the required publication, please enter the same manually in the blank space provided.**
Section 4 : This section comprises reminders to obtain tidal and tidal stream predictions for departure and arrival ports and any areas in between where tides or tidal streams may be significant. Significant currents that may be encountered should be noted in relevant areas of charts or ENCs. Where sections of the voyage are dependent on tidal heights, the Tidal Window sections should be completed. Appropriate markings must be made on chart / ENC.

Section 5: Weather conditions, briefly describe weather expected enroute and special climatic conditions/phenomenon which may be experienced.
Section 6 : Please fill in the relevant reporting details and attach a VTS reporting diagram (If applicable) from the ALRS for ready reference.
Section 7 : Please fill in the BTM chart for the present voyage with special reference to doubling up of watches as required.
Section 8: Please fill in the ISPS information for the relevant passage. Where applicable select the data from the drop down list. This section should be completed and signed by the Ship security officer.
Section 9: Country, US State and MARPOL area specific environmental regulations are summarized in this section and will be displayed once the appropriate Country / US State (if applicable) and MARPOL special area are selected.
Section 10: Please be guided by the emergency procedure manual for handling emergencies and fill in section 4 to detail the Ports of refuge during the voyage. Please list general precautions for the voyage in the text box provided. **For example**: Keep clear of Fishing nets which will be encountered whilst in Taiwan straits. Keep a good look out for small wooden fishing boats not readily visible on the radar. These notes must be written at appropriate places on chart / ENC.
Section 11,12,13 : Please fill in name of the waypoint and the co-ordinates (LAT/LONG) in the shaded cells. As soon as the waypoint number is fed in , the UKC information becomes visible. The program calculates the Distance to go and the True course. Please also fill in the intended transit speed and the charted depth at every waypoint . The program will provide UKC at every waypoint. **If the UKC is less than that required for shallow waters (10% of max. static draft or 1m whichever is greater), the UKC cell will be shaded Red.**
Section 11,12,13, POSITION CHECKING INTERVAL: For ECDIS vessels where GPS sensor is operating correctly and GPS position accuracy has been verified through low HDOP levels or by using the methods recommended by the GPS equipment maker, it may not be necessary to manually plot positions at the 'Position Checking Interval'. However, the position of the vessel must be **checked** on ECDIS at least as per the 'Position Checking Interval' and cross-checked periodically using independent means of obtaining position when available (including RADAR overlay, cross bearings, cross ranges, parallel indexing, clearing bearings etc). Where possible, evidence of such cross-checks should be maintained (ex. fixes on ENC & screenshots showing RADAR overlay or cross bearings and ranges). On paper charts, 'Position Checking Interval' is the same as 'Position Plotting Interval'. See Bridge procedures for more information on this subject.
For guidance regarding methods of obtaining position, refer to Bridge Procedures in the Safety Management System.

Section 11,12,13, SQUAT: Note: Increase in draft forward or aft due to squat effect could be more than mean draft increase. Squat is likely to result in an increase in forward draft if the block coefficient is > 0.7 and increase in aft draft if the block coefficient is < 0.7. However, this applies only when the ship is at even keel. If already trimmed, squat effect is likely to increase the trim further in the same direction as the existing trim. So, if trimmed by stern, stern trim will increase due to squat.

Section 11,12,13, CATZOC: Check and fill in the value of CATZOC for every voyage leg as obtained from the CATZOC layer on ECDIS or the pick report. CATZOC may aso be shown in the survey diagrams of paper charts. CATZOC category may be obtained by counting the number of 'stars' in each CATZOC triangle and selecting the appropriate code as follows: A1 (6 stars), A2 (5 stars), B (4 stars), C (3 stars), D (2 stars) or U (U). These codes are also available in the 'pick report'.

Section 11,12,13, UKC: Where the UKC value is highlighted in Red, this indicates that UKC is below the minimum requirement in shallow waters and a Risk Assessment is necessary. Short-cut formulae are used for squat estimation in the way-point sections. In the way-point sections, the confined waters formula is used if the charted depth is less than 1.20 times draft and speed is taken from the intended transit speed, which may be ground speed. For more accurate estimation of squat, the UKC calculation sheets should be used, where the full-form of the squat formula, based on depth and width of the channel is used.

Section 11,12,13, CATZOC DEPTH CAUTION (usually ECDIS ships only): Where "Verify Depth" appears, the UKC may be lesser than the minimum required in shallow waters due to inaccuracy of charted depths as defined in the CATZOC table (ref. BPM), or where the accuracy is not assessed. The ENC 'Pick Report' should be checked for more details of sounding accuracy and charted depths should be verified from local authorities, previous voyages, Shipmaster's reports or an alternative route planned through deeper waters.

Section 14 B, C, D: The UKC calculation must be carried out as per instructions in 14 A. Fill in the required data in the Shaded cells. Section 14 B/C/D UKC calculations are specifically provided to calculate under keel clearance with variable drafts, vessels condition and after factoring in local tides and effects of sea and swell.

Once completed, please take print outs of all the sections. **Additional relevant data may be attached to the passage plan as required.**

Section 15: A print out of this section must be obtained and then the Master must review the entire passage plan. All the data filled in various sections must be reviewed by the Master and YES/NO/NOT APPLICABLE must be written down in the space provided. All officers comprising the bridge team must sign the plan to confirm understanding and compliance and clarify doubts if any.

Section 16: This section is to be used for recording last minute changes made by the Master to the passage plan, before or after the Pilot's boarding. Changes must be discussed with the other members of the Bridge team in order to ensure proper monitoring.

Section 17: Upon completion of a voyage, the Master must conduct a post-voyage de-briefing with the navigating team, to discuss changes that needed to be made to the passage plan or whether any aspects of the plan could have been improved. The results of such de-briefing are to be recorded in this section.

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Bridge manning levels are desribed in section 7 (Bridge Management Team)

Sections 14F(1) and 14F(2) are intended for the calculation of overhead clearance from obstructions such as bridges and power cables.

Passage Plan

Please save all ECDIS logs (including details log and voyage log) plus user maps & settings on a CD/DVD at the end of every voyage and file with a printout of this Passage Plan.

THE PRIMARY MEANS OF NAVIGATION FOR THIS VOYAGE IS | **ECDIS**

(On ships with functional ECDIS, 'Paper Charts' may be selected as an option ONLY if item 3.2.1 of Form E of the SEQ certificate states 'Both Pr

Section 1: General information

Vessel's Name	M T CELSIUS MALAGA
Voyage Number	26
Vessel's Condition	LOADED
Target Speed (kts)	13.50
Target RPM	125
Total Steaming Time (hrs/days - specify)	18 DAYS
Total distance to go (nm)	5660
Max height above Keel (Metres)	39.22
Max Summer Draft (Metres)	9.772
Max Beam Of Vessel(Metres)	24.2
Block Coefficient	0.79
F.W.A. (In decimals of a Metre Only)	0.217

Departure Port Information	
Name of the Port	SANTOS
ETD	19.07.2018 1800HRS
Time Zone	GMT -3
Estimated ROB's on Departure	
HFO (MT)	
MDO/MGO (MT)	
FW (MT)	
MECYL (LTRS)	

Arrival Port Information	
Name of the Port	HOUSTON
ETA	07.08.2018 1200HRS
Time Zone	GMT-4
Estimated ROB's on Arrival	
HFO (MT)	
MDO/MGO (MT)	
FW (MT)	
MECYL (LTRS)	

Departure Draft (mtrs)	
Fore	9.00
Aft	9.00
Max Air Draft	30.22
Density	1.025
Arrival Draft (mtrs)	
Fore	9.00
Aft	9.00
Max Air Draft	30.22
Density	1.025

Fuel consumption (per day in MT)	
HFO	24
MDO/MGO	25
L.O.- ME CYL Ltrs/day	190

Clock to be advanced/retarded during voyage	
Clocks	TO BE RETARDED BY
Duration	1
If the vessel is Crossing International Date line	
Date of Crossing	NA
Day Advance/ Retard	Not Applicable

Fresh Water Data (per day in MT)	
FW Consumption	10
FW Production	12
Net Gain / Loss	2

ECDIS
PAPER CHARTS

Select from list
TO BE ADVANCED BY
TO BE RETARDED BY
Not Applicable

Select from list
Loaded
In Ballast

Select from list
Not Applicable
30 MINUTES
1 HR
1 HR 30 MINUTES
2 HRS
2 HRS 30 MINUTES
3 HRS
3 HRS 30 MINUTES
4 HRS
4 HRS 30 MINUTES
5 HRS
5 HRS 30 MINUTES
6 HRS
6 HRS 30 MINUTES
7 HRS
7 HRS 30 MINUTES
8 HRS
8 HRS 30 MINUTES
9 HRS
9 HRS 30 MINUTES
10 HRS
10 HRS 30 MINUTES
11 HRS
11 HRS 30 MINUTES
12 HRS
12 HRS 30 MINUTES
13 HRS

Select from list
Not Applicable
Advance one Day
Retard one Day

Section 2: Voyage Appraisal & Planning

A) Following points are applicable to paper charts only

a) Confirm that all voyage charts are of the largest appropriate scale

b) Check voyage charts corrected to latest avaliable weekly NTM. State NTM week no. to v

c) Check voyage charts corrected for applicable T&P notices

d) Check courses plotted on charts with way-point co-ordinates, courses and markings as markings on Chart.

e) Confirm way-points in GPS and route created using these waypoints. Check appropriate

B) List voyage ENC cell numbers and/or paper chart numbers below (E

(Attaching printout of ENC list from planning software as an alternative to enterin

LIST ATTACHED			

-

	NA
vhich voyage charts corrected	NA
	NA
per below, noted on charts. Ensure that all reciprocal courses and distances are erased and no old	NA
e cross-track limits set up in GPS.	NA

:NC and paper)

g ENC numbers is acceptable)

C) All applicable markings (including but not limited to below) should b

a) Parallel index lines when coasting

b) Clearing lines and bearings, heading marks, leading lines

c) No-go Areas (Mainly for dangers to navigation close to the charted track)

d) Wheel-over Position

e) Contingency Anchorage

f) Boundary of Special Areas (eg. SECA / ECA Area, Right Whale Area, Great Barrier Ree

g) Abort Line (refer BPM Sec-3.3)

h) Areas of significant Tides / Currents / Eddies / Minimum UKC / Possibility of banking efl

i) Landfall targets & Lights / Prominent Navigation & Radar conspicuous marks

j) VTS / Port Control / Pilot Station Reporting Points

k) Voyage legs where speed must be limited, locations for speed reduction, unlashing anc

l) Areas where 2 Steering motors to be switched "on" (if applicable)

m) Cautionary Areas / Areas where heavy traffic or crossing traffic expected

n) Nav warnings transmitted by satellite, Navtex, coast stations on VHF, etc.

o) Position checking interval & position checking methods for each leg

p) Point where next chart should be used and next chart number

D) This section is applicable to ENCs only

Note: Terms/ items listed below are generic in nature. Different Terms/ fe
limited to ECDIS manual , mar

a) Check that the presentation library installed in ECDIS is edition 4.0. Confirm that CHAR
introduced in the new edition, including date-dependent objects (you will need to chang
(The IHO circular describing CHART 1 objects is available in Bridge Procedures)

b) Vessel must have the largest appropriate scale of ENC charts for the proposed voyage.
(Ensure the e-catalogue in use is up-to-date)

c) Check that the ENCs for arrival / departure port and other congested transit waters (Lik
Channel etc.) are of the appropriate scale ie. 6 (Berthing Scale) or 5 (Harbour Scale) for
(Inspect the 3rd Alpha-Numeric of the ENC name to verify above)

d) If the scale of charts is not appropriate as given in c) above, check if BA or local charts h
reliability of data and place an order for these.

e) Check if ENC permits are valid for the duration of voyage. Contact ENC distributor if val

f) Check that latest weekly updates, including AIO updates where applicable, have been a
no. of e-mail update: 28/18 Wk No. of DVD update:

AFTER APPLYING EVERY WEEKLY UPDATE TO IDENTIFY ANY NEW CHART ALERTS / H

g) Plot all T&P notices affecting the route on Voyage ENCs using Manual chart update fea
(Many, but not all, Hydrographic offices include T&Ps in ENCs. The status of T&P inclusio
checked for T&Ps but the most reliable method of checking T&P is through the Admiralty

h) Plot all relevant Maritime Safety Information, from sources like Navtex, EGC, Radio warr
Manual chart update feature.
(Ensure Manual updates made earlier on ENCs are valid. Delete non-valid ones, Manual up

i) Inspect the chart legend / pick report of all Voyage ENCs for information about CATZOC
and datum used for depths. If CATZOC is below A1, ensure that planning takes this intc
(Occasionally for some ENCs, datum used for depths may be based on MSL (Mean Sea Le
Categories are assigned on the basis of accuracies of the survey data related to charted n

j) In the route planning stage, select maximum layers for display.

k) ~~CALCULATE ECDIS SAFETY DEPTH AND CONTOUR SETTINGS USING THE CON~~
~~CHANGED AT MASTER'S DISCRETION - SEE NOTE BELOW TABLE) AND INPUT~~

l) Set Display settings for lines and boundaries to 'symbolized', not 'plain'. Display setting

m) Conduct interrogation of chart for underlying data using Chart properties / info tool and i
level. ***(Even when ALL OTHER layers have been selected for display , ENCs may not visu***

n) Check and confirm that initial settings of ECDIS including but not limited to ship propert
distances, maximum speed, ROT limits etc. are correct.

o) Set default values like Speed, XTE limits, Radius of turn, WPT arrival radius, Recomme

p) Inspect each individual leg for appropriateness of Leg speed, ROT / Radius of turn, XTI
settings as necessary.
(Inspect each leg physically for appropriateness of values. The ECDIS may give an indicat

q) Select appropriate criteria (if applicable) for Safety Check and / or Limit & TCS Check. I
with all layers on / largest scale ENCs.

r) **PERFORM SIMULATED ROUTE CHECK WITH ALL LAYERS ON & LARGEST SCA**
ROUTE CHECK, VISUALLY CHECK ALL LEGS WITH ALL LAYERS ON AND WITH
(ECDIS Alerts have limitations and only assist the Mariner to review the Route and same s
available means beyond ECDIS, to do proper Passage Planning. Appraisal CANNOT be do

s) Make appropriate User Maps/Editors/Charts / Notes. These should include as applicabl

(All relevant information which is ship and route specific as well as appropriate to good pa

t) In User Maps/Editors/Charts, alarm features for user defined areas to be avoided like W
must be activated. Additional features like ScanMin-ScanMax (range scaling) of user di
must be sufficiently understood and used

u) Before commencing a new Voyage, the user must check and activate various settings ir
Alert / Guard Zone (with varying levels of Alarm management if applicable), area of Cl
& setting track & contour, enabling & setting sensor setting, enabling & setting AIS /TT
(User is advised to do final checks on all routes, user charts, ENCs etc. , sensors, logbo

v) Review and set up AIS / TT settings and filters (with respect to Display , Sleeping Targe
Association and CPA/TCPA).
(User is reminded that ECDIS is NOT an anti-collision tool. Risk of collision must be prima

w) Check if manufacturer suggested test and maintenance has been carried out on schedu

x) Printout the latest status of T&P inclusion in ENC (available as a PDF file in each AVCS update
(available as a text file in each AVCS update DVD) and post for ready reference, at ECDIS.

E) CONTOUR / DEPTH AND HEIGHT SETTING CALCULATION TABLE - (SEE

Input information in shaded cells. Also ensure all cells filled up in Section

Safety contour and depth settings MUST NOT be considered as fixed for t

INPUT VALUES BELOW	
MAXIMUM SALT WATER STATIC DRAFT FOR CURRENT VOYAGE (metres)	9.00
DENSITY OF WATER (input values between 0.99 and 1.032)	1.013
CATZOC (choose input values from A1 (6 stars), A2 (5 stars), B (4 stars), C (3 stars), D (2 stars), or U). Obtain	C
SPEED FOR SQUAT CALCULATION (kts)	14.00
EXPECTED ANGLE OF HEEL / ROLLING (degrees)	5.00
INCREASE IN DRAFT EXPECTED DUE TO SEA / SWELL (metres)	0.50
INCREASE IN DRAFT EXPECTED DUE TO PITCHING (metres)	0.50
HEIGHT OF TIDE *(metres), (where applicable)*	0.00

RECOMMENDED SHALLOW CONTOUR VALUE	**15.39**
RECOMMENDED SAFETY CONTOUR VALUE	**16.39**
RECOMMENDED SAFETY DEPTH VALUE	**16.39**
RECOMMENDED DEEP CONTOUR VALUE	**21.81**

WARNING-ENABLED 'NO-GO AREAS' MUST BE DRAWN IN WATERS SHALLOW

NOTE: THE DEPTH VALUES ABOVE MAY BE CHANGED AT MASTER'S DISCR
KEEP VESSEL OUTSIDE A SPECIFIC DEPTH CONTOUR DURING PORT ARRIV

Formulae used for computation of above values

Safety depth = max. dynamic draft in DW + reqd. UKC in shallow waters + CATZOC de

Safety contour = safety depth Deep contour = max. dyna

Shallow contour = max. dynamic draft in dock water + CATZOC depth inaccuracy - Heig

Safety height = max. height above keel - max. SW static draft + Height of Tide + 2m

F) SAFETY SETTINGS, LOOK AHEAD AND XTL VALUES (refer to BPM) MAY BE NOT

THE TIME WHEN SETTINGS / VALUES ARE CHANGED IN ECDIS MUST BE RECO

FROM (WP/POSN)	**BARBENEL ISLAND**	
SAFETY CONTOUR VALUE (Should NOT be less than safety depth)		13
SAFETY DEPTH VALUE		13
DEEP CONTOUR VALUE		20
LOOK AHEAD VALUES, AS APPLICABLE TO ECDIS TYPE (Description may be ame		
VECTOR LENGTH (min) -	***minutes is recommended***	5
AROUND (P) (NM)		0.02
AROUND (S)(NM)		0.02
XTL (Cross-Track Limit) Settings		
Port (NM/mtr)	0.02	

FROM (WP/POSN)	**24*03*S046*21*W**	
SAFETY CONTOUR VALUE (Should NOT be less than safety depth)		17
SAFETY DEPTH VALUE		17
DEEP CONTOUR VALUE		22
LOOK AHEAD VALUES, AS APPLICABLE TO ECDIS TYPE (Description may be ame		
VECTOR LENGTH (min) -	***minutes is recommended***	15
AROUND (P) (NM)		0.5
AROUND (S) (NM)		0.5
XTL (Cross-Track Limit) Settings		
Port (NM/mtr)	0.5	

FROM (WP/POSN)		
SAFETY CONTOUR VALUE (Should NOT be less than safety depth)		
SAFETY DEPTH VALUE		
DEEP CONTOUR VALUE		
LOOK AHEAD VALUES, AS APPLICABLE TO ECDIS TYPE (Description may be ame		
VECTOR LENGTH (min) -	***minutes is recommended***	5
AROUND (P) (mtr)		0.02
AROUND (S) (mtr)		0.02
XTL (Cross-Track Limit) Settings		
Port (NM/mtr)	0.02	

FROM (WP/POSN)

SAFETY CONTOUR VALUE (Should NOT be less than safety depth)
SAFETY DEPTH VALUE
DEEP CONTOUR VALUE

LOOK AHEAD VALUES, AS APPLICABLE TO ECDIS TYPE (Description may be ame
VECTOR LENGTH (min) - ***minutes is recommended***
AROUND (P) (mtr)
AROUND (S) (mtr)

XTL (Cross-Track Limit) Settings
Port (NM/mtr)

FROM (WP/POSN)

SAFETY CONTOUR VALUE (Should NOT be less than safety depth)
SAFETY DEPTH VALUE
DEEP CONTOUR VALUE

LOOK AHEAD VALUES, AS APPLICABLE TO ECDIS TYPE (Description may be ame
VECTOR LENGTH (min) - ***minutes is recommended***
AROUND (P) (mtr)
AROUND (S) (mtr)

XTL (Cross-Track Limit) Settings
Port (NM/mtr)

FROM (WP/POSN)

SAFETY CONTOUR VALUE (Should NOT be less than safety depth)
SAFETY DEPTH VALUE
DEEP CONTOUR VALUE

LOOK AHEAD VALUES, AS APPLICABLE TO ECDIS TYPE (Description may be ame
VECTOR LENGTH (min) - ***minutes is recommended***
AROUND (P) (mtr)
AROUND (S) (mtr)

XTL (Cross-Track Limit) Settings
Port (NM/mtr)

›e made on ENCs and paper charts

NA

:f, etc.)

'ect

hors, echo sounder 'on' etc.

atures may exist for ship's ECDIS. If in doubt, consult all available means including but not ıufacturer support and ECDIS SUPPORT CELL.

T 1 can be viewed and that the new objects
e the viewing date temporarily), can be seen.

If not, obtain permits as required.

e Singapore Straits, English
Port and at least 4 (Approach Scale) for transit waters

ıave a better scale and/or

idity needs to be extended.

pplied to ENCs. Week
21/18

AZARDS)
ture.
ı in ENCs is available as a PDF file on each AVCS update DVD. AIO where available and updated may be weekly Notices to Mariners. AIO layer MUST NOT be switched on permanently during route monitoring)

ıings etc, on Voyage ENCs using

odate log history to be maintained for each ENC)

: (category of zone of confidence)
account; also, if datum is based on MSL, ensure that tidal data that may be based on LAT is used
evel) instead of LAT (Lowest Astronomical Tide), CATZOC values vary from A1 to U (not assessed). ositions and depths.)

TOUR / DEPTH AND HEIGHT SETTING TABLE BELOW (THESE VALUES MAY BE THESE INTO BOTH ECDIS. ALSO SET LOOK AHEAD & XTL VALUES

s for chart symbols, shallow pattern to be selected appropriately.

nvestigate information to deepest
ıally display all vital information within the chart display area. This information may include but not be

ies, antenna positions, forwarding

ınded ROT, Course change

E, Safety Margin etc. Change

ion of 'impossible turn' if the Radius set requires a ROT greater than that set)

Route Check is to be performed

LE ENCs. AFTER SIMULATED
ENCs ON LARGEST APPROPRIATE SCALE.
should not be relied on. Mariner must visually inspect route, do pick reports on voyage ENCs and use all ne by solely using ECDIS)

e all chart markings stated in sub- section C) above. ☐

ıssage planning, to be inputted using this feature)

arning Area/Line (alarm enabled areas), ☐
ɔjects of layers must be used. Merging/import/export, offsetting User maps datum. linking to route, etc,

ıcluding but not limited to Chart ☐
art Alert, activation of correct Route, Waypoint, user chart and notes, correct contour setting, enabling
and related filters, clearing offset and ensuring datum selected on GPS & ECDIS is WGS 84, enabling
ɔk, track etc before activating route and commencing voyage.)

ts , AUTO ACT, Lost target, ☐

rily determined using other means including visual bearings, ARPA and Radar tracking.

ule. ☐

DVD) and the latest 'Readme.txt' file ☐

NOTE BELOW TABLE)

1 General Information)

he entire passage. Multiple entries for critical legs must be entered in section F below.

AUTO - CALCULATED VALUES *(METRES)*	
MAXIMUM STATIC DRAFT IN DOCK WATER	9.10416
INCREASE IN DRAFT DUE TO SQUAT (Open Waters formula - double the value for confined waters)	1.55
CATZOC depth inaccuracy	2.69
INCREASE IN DRAFT DUE TO HEEL / ROLLING	1.05
INCREASE IN DRAFT DUE TO SEA / SWELL	0.50
INCREASE IN DRAFT DUE TO PITCHING	0.50
MAXIMUM DYNAMIC DRAFT IN DOCK WATER	12.71

WA

RECOMMENDED SAFETY HEIGHT VALUE *(If input feature available in ECDIS)*	32.12

ER THAN SELECTED SAFETY CONTOUR!

ETION ON SPECIFIC SECTIONS OF THE PASSAGE - FOR EXAMPLE WHEN IT IS NECESSARY TO
AL (AFTER CROSSING THE ORIGINAL SAFETY CONTOUR) AND FACILITATE THE ALARM AND A

pth inaccuracy - Height of Tide.
ımic draft + maximum static draft
ght of Tide

ΓED BELOW (ADD SHEETS IF NECESSARY)
RDED IN THE DECK LOG BOOK.

24*03*S046*21*W	
SAFETY HEIGHT VALUE	33
SHALLOW CONTOUR VALUE	12
ended to suit the ECDIS type)	
Stbd. (NM/mtr)	0.02

SAFETY HEIGHT VALUE	33
SHALLOW CONTOUR VALUE	16
ended to suit the ECDIS type)	
Stbd. (NM/mtr)	0.5

SAFETY HEIGHT VALUE	
SHALLOW CONTOUR VALUE	
ended to suit the ECDIS type)	
Stbd. (NM/mtr)	0.02

SAFETY HEIGHT VALUE
SHALLOW CONTOUR VALUE

ended to suit the ECDIS type)

Stbd. (NM/mtr)

SAFETY HEIGHT VALUE
SHALLOW CONTOUR VALUE

ended to suit the ECDIS type)

Stbd. (NM/mtr)

SAFETY HEIGHT VALUE
SHALLOW CONTOUR VALUE

ended to suit the ECDIS type)

Stbd. (NM/mtr)

INPUT CORRECT DENSITY OF WATER AT LEFT & FWA ON GEN INFO PAGE

Enter Block Coefficient In section 1

A1 A2 B C D U

Enter Beam of vessel in Section 1

RNING - CATZOC IS 'U' (UNASSESSED) AND DEPTH ACCURACY UNKNOWN. ACCURACY VALUE IS ASSUMED TO BE 'C' + 0.5M FOR THE PURPOSE OF SETTING SAFETY DEPTH AND CONTOUR VALUES.

13.71	Enter max. height above keel in section 1

THAT OF

WARNING - CATZOC IS 'D' (WORSE THAN 'C') AND DEPTH ACCURACY IS UNKNOWN.
ACCURACY VALUE IS ASSUMED TO BE THAT OF 'C' + 0.5M FOR THE PURPOSE OF
SETTING SAFETY DEPTH AND CONTOUR VALUES.

Section 3: Publications

M.V/M.T. M.T CELSIUS MALAGA   Voyage No: 26

Voyage Charts / ENCs corrected upto week number: 28/18

Applicable Admiralty List of Radio Signals / ADRS

List of Radio Signals	Latest Edition	Edition on board	Corrected to Week No.
ADRS 1,3,4,5 Area 2 - Americas, parts of Asia and Australasia	18.0	18.0	29/18
ADRS 2 Area 2 - Americas, parts of Asia and Australasia	18.0	18.0	29/18
ADRS 6 Area 10 - South Atlantic & Indian Ocean (Southern part)	18.0	18.0	29/18
ADRS 6 Area 9 - North America (East coast) and Caribbean	18.0	18.0	29/18

Applicable Coast Sailing Directions / e-NP

Sailing Directions / e-NP	Latest Edition	Edition onboard	Corrected to Week No.
e-NP5 South America Pilot Vol. I	2017	2017	28/18
e-NP7A South America Pilot Vol 4	2016	2016	28/18
e-NP70 West Indies Pilot Vol 1	2015	2015	28/18
e-NP71 West Indies Pilot Vol 2	2017	2017	28/18
e-NP69A East Coasts of Central America and Gulf of Mexico Pilot	2015	2015	28/18

Applicable Admiralty List of Lights and Fog Signals / ADLL

List of Lights	Latest Edition	Edition on board	Corrected to Week No.
ADLL Area 9 - North America (east coast) & Caribbean	18.0	18.0	29/18
ADLL Area 10 - South Atlantic & Indian Ocean (southern part)	18.0	18.0	29/18

[illegible]

Tide tables / Tidal Stream Atlases	Latest Edition	Edition onboard	Corrected to Week No.
Total Tide Area 8 - Pacific Ocean, New Zealand, N&S America (W coast)	18.0	18.0	29/18

[illegible]

Details	Inforce warning nos. / Remarks	Applied on charts
Navareas / Hydrolants / Hydropac warnings	FILED	Y
Vessel's present Navarea	5	Y
Navareas to be transited	6	Y
Navtex /local area warnings?	YES	Y
Navtex Areas selected	YES	Y
Weather Facsimile broadcasts (List the Chart station)	RIO DE JANEIRO	Y
Ocean routeing services	YES	NA
Radio Weather Broadcasts?	YES	NA
Inmarsat Broadcasts (EGC	YES	Y
Special area warnings	NA	NA

[illegible]

Publication	Latest Edition	Edition onboard	Remarks
NP 131 Chart Catalogue	2018	2018	DIGITAL
NP 136 Ocean Passages of the world	2018	2018	ENP
NP 100 Mariners hand	2016	2016	ENP
Guide to port entry	2016/16	2015/16	
Load line Chart	2014	2014	2014
Routeing charts & Guidance for Laden tanker	2015	2015	
Admiralty Digital	1.83	1.83	25/18
ADMIRALTY	4.4	4.4	25/18
NP 735 IALA Buoyage System	Arrival port Region B		Dep. Port Region B

ED_002238_00000055-00036

Section 4: Tides and current

M.V./M.T.: M T CELSIUS MALAGA Voyage No: 26

1) Attach copies of tidal and tidal stream data for expected date/s of departure & arrival to this passage plan. ☐

2) Where voyage includes passages through areas affected by tides or tidal streams between port of departure and arrival, ensure tidal and tidal stream data is attached to this passage plan. ☐

3) Expected directions and rates of currents expected on passage should be noted on chart ☐

4) When passage is restricted by tide (such as when transiting Singapore straits on a deep-drafted vessel), the following tidal window calculations should be completed. ☐

TIDAL WINDOW CALCULATIONS (WHEN PASSAGE IS RESTRICTED BY TIDAL HEIGHT)

POSITION 1 (PLEASE COMPLETE A UKC CALCULATION FOR THIS POSITION)

NAME/CO-ORDINATES OF POSITION 1: TIDE SHEET ATTACHED

MAX DYNAMIC DRAFT (INCL SQUAT + VSL MOVEMENT)

DEPTH AT CHART DATUM AT POSITION 1

HEIGHT OF TIDE REQUIRED AT THIS POSITION FOR MEETING REQUIRED UKC:

VESSEL MUST ARRIVE AT THIS POSITION BETWEEN THE FOLLOWING TIMES:

FROM (DATE/TIME) TO

ETA AT POSITION 1 (DATE & TIME):

TIDAL HEIGHTS AND TIMES AT POSITION 1

NAME OF STANDARD / SECONDARY PORT:

CO-ORDINATES OF STD / SEC PORT:

DATE				
	TIME	HEIGHT	TIME	HEIGHT
HW				
LW				

POSITION 2 (PLEASE COMPLETE A UKC CALCULATION FOR THIS POSITION)

NAME/CO-ORDINATES OF POSITION 2:

MAX DYNAMIC DRAFT (INCL SQUAT + VSL MOVEMENT)

DEPTH AT CHART DATUM AT POSITION 2

HEIGHT OF TIDE REQUIRED AT THIS POSITION FOR MEETING REQUIRED UKC:

VESSEL MUST ARRIVE AT THIS POSITION BETWEEN THE FOLLOWING TIMES:

FROM (DATE/TIME) TO

ETA AT POSITION 2 (DATE & TIME):

TIDAL HEIGHTS AND TIMES AT POSITION 2

NAME OF STANDARD / SECONDARY PORT:

CO-ORDINATES OF STD / SEC PORT:

DATE				
	TIME	HEIGHT	TIME	HEIGHT
HW				
LW				

POSITION 3 (PLEASE COMPLETE A UKC CALCULATION FOR THIS POSITION)

NAME/CO-ORDINATES OF POSITION 3:
MAX DYNAMIC DRAFT (INCL SQUAT + VSL MOVEMENT)

DEPTH AT CHART DATUM AT POSITION 3

HEIGHT OF TIDE REQUIRED AT THIS POSITION FOR MEETING REQUIRED UKC:
VESSEL MUST ARRIVE AT THIS POSITION BETWEEN THE FOLLOWING TIMES:
FROM (DATE/TIME) TO

ETA AT POSITION 3 (DATE & TIME):

TIDAL HEIGHTS AND TIMES AT POSITION 3

NAME OF STANDARD / SECONDARY PORT:
CO-ORDINATES OF STD / SEC PORT:

DATE				
	TIME	HEIGHT	TIME	HEIGHT
HW				
LW				

Section 5: Weather conditions

M.V./M.T.: M T CELSIUS MALAGA Voyage No: 26

Navtex Station
CURACAO -H
ISABELLA R
MIAMI -A
NEW ORLEANS -G

Weather Fax Station
RIO DE JANERIO
NEW ORLEANS

1) Are Weather Routing Services being provid: YES
   Which organization is providing these servic: PASSAGE WEATHER
   Is the routine weather routing format/report: YES

2) What are the expected weather conditions during the passage ?
   MODERATE SEA AND SWELL

3) What is the max height of swell expected at Departure/ Arrival port &
   1.5-2.5 METERS

4) What is the max wind speed expected at Departure/ Arrival port & during
   15-25 KNOTS

5) What is the max / minimum temperature likely to encounter during voyage
   5-15 DEG C

6) Is the vessel expected to experience areas with restricted visibility during
   NA

7) Is the vessel expected to encounter ice during passage, if yes please
   NA

8) Is the vessel expected to encounter any Tropical Cyclones / Typhoons /
   NA

9) What is the GM of the vessel on Departure, Arrival & expected minimum

Departure	1.88	Arrival	1.9	Passage	1.88

Select from List
Yes
No
Not Applicable

Section 6: Reporting Details

M.V./M.T.: M T CELSIUS MALAGA Voyage No: 26

A) ENOA / D

1. ENOA/D to send (For US Calling vessels only) — **Yes**
   If Yes , Expected Date of submission ENOA/D to NVMC/ SANS — **Date**

2. Expected Date of submission ENOA/D to OFFICE REVIEW — **Date**

Reminder:

1) Vessel to send ENOA for office review prior sending same to NVMC and ENOA has to be forwarded to NVMC at least 96 hrs prior entering US Waters (Voyage type = Foreign to US).

2) Vessels calling US Waters are required to send completed passage plan copies duly signed by the Master and othe Navigating Officers to Office on email ID fleet- ccmnav@fleetship.com prior entering US Waters.

3) Vessels calling US to US port (different COTP zone) are required to send 'E-NOA with voyage type US to US'.

4) Vessels departing US ports are required to send completed passage plan copies duly signed by the Master and oth Navigating Officers to Office on email ID fleet- ccmnav@fleetship.com prior vessel's departure.

5)Vessel to send ENOD for office review prior sending same to NVMC and ENOD has to be forwarded to NVMC atleast hours prior departing the berth (Voyage type = US to Foreign).

Remarks (If any)

NA

B) PILOTS

1. How many days pre arrival notice to be given to Pilot station at arrival port.

Days _____ **Hrs** _____

2. Means of Communication with pilot station (Email, VHF etc)

VHF Channels 16-14 **Email address** disp@houston-pilots.com

Any other means +1 713 6459620

Remarks (If any)

praticagem@paranaguapilots.com.br

C) VTS (Vessel traffic system)/ Ship's position reports during the voyage :

VTS Sector	Reporting Position	VTS Callsign	VHF Channel	Remarks
SANTOS PILOT PLT	AS MARKED IN ENC	**SANTOS PLT**	16-11	AS ADRS VOL 6
SECTOR 1	AS MARKED ON ENC	**HOUSTON**	14	1 HR BEFORE ARRIVAL
		PILOTS		

Is Vessel participating in any SRS Ship reporting system (eg AMVER/ AUSREP/ JASREP etc) — **Yes**

Remarks (If any)

SISTRAM

D) CHARTERERS/ Agents

1. Is any notice required to be given to Charterers/agents prior departure / Arrival and by what means — **Yes**

2. Means of Communication with Charterers/agents

Email address cdias@rochamar.com **Email address** Marineops@methanex.com

Email address chemoperations@ultratank.com **Email address** benoprpng@rochamar.com

Any other means _____

3. Interval of notices to Charterers/agents, Please state days/ hrs

Days 1 DAY **Hrs** _____

Remarks (If any)

ARRIVAL/DEPARTURE & NOON POSITION REPORT ON DAILY BASIS TO BE SENT TO CHARTERER

Select fron
Yes
No
Not applic

Select fron
Yes
No
NA

Section 7: BRIDGE MANAGEMENT TEAM

M.V./M.T.: M T CELSIUS MALAGA Voyage No: 26

Note: Cadets and any other ratings without appropriate certification should not be part of

1. AT SEA (NON-DISTRACTION POLICY AT MASTER'S DISCRETION)

RESPONSIBILITY	0000 - 0400 & 1200 - 1600	0400-0800 & 1600- 2000	0800 – 1200 & 2000 - 2400
OOW	2/OFF	ADD 3/OFF	3/OFF
Lookout *(see Note below)*	AB-3	AB-2	AB-1

2. AT SEA, IN RESTRICTED VISIBILITY (NON-DISTRACTION POLICY ALERT RE

RESPONSIBILITY	0000 - 0400 & 1200 - 1600	0400-0800 & 1600- 2000	0800 – 1200 & 2000 - 2400
Master should be present on bridge in case of high traffic density or any other time deemed necessary by him			
OOW	2/OFF	ADD 3/OFF	3/OFF
Lookout	OS2	OS-2 /OS-1	OS1
Helmsman (If required)	AB-3	AB-2	AB-1

NOTE:

1. Master should be notified if visibility deteriorates below 5 nautical miles or greater distance

2. Helmsman should be posted in addition to lookout if considered necessary.

3. ARRIVAL/ DEPARTURE PORTS, and/ or IN CONGESTED WATERS (DISPLAY

RESPONSIBILITY	0000 - 0400 & 1200 - 1600	0400-0800 & 1600- 2000	0800 – 1200 & 2000 - 2400
Master should be present on bridge during the time of arrival/ departure port.			
OOW	2/OFF	ADD 3/OFF	3/OFF
Helmsman	AB-3	AB-2	AB-1
Lookout	OS-2	OS-2 /OS-1	OS-1

4. PILOTAGE WATERS (DISPLAY ALERT RED)

RESPONSIBILITY	0000 - 0400 & 1200 - 1600	0400-0800 & 1600- 2000	0800 – 1200 & 2000 - 2400
Master should be present on bridge during the pilotage.			
OOW	2/OFF	ADD 3/OFF	3/OFF
Helmsman	AB-3	AB-2	AB-1
Lookout	OS-2	OS-2 /OS-1	OS-1

5. HIGHEST LEVEL OF BRIDGE MANNING (AT MASTER'S DISCRETION) (DISPL

RESPONSIBILITY	0000 - 0400 & 1200 - 1600	0400-0800 & 1600- 2000	0800 – 1200 & 2000 - 2400
Master should be present on bridge during this Manning Level.			
OOW	2/OFF	ADD 3/OFF	3/OFF
Additional Officer	ADD3.OFF/3 OFF	2OFF/ 3	ADD 3
Helmsman	AB-3	AB-2	AB-1
Lookout	OS-2	OS-2 /OS-1	OS-1

Notes: (OS-1)=0600-1200/1800-2400 (OS-2)=0000/0600/1200-1800

1. Some examples of the situations requiring the Highest level of Bridge Manning are:
short periods of time, in order to avoid fatigue.

2. If lookout is dispensed with at sea during daylight hours, in open waters and at Master's

3. Under prolonged pilotage or similar circumstances, or if he is tired, the Master may at his

Section 8: ISPS requirements

M.V./M.T.: M T CELSIUS MALAGA Voyage No: 26

ARRIVAL PORT/ COUNTRY **HOUSTON / USA**

BERTH NAME /NUMBER:

SECURITY LEVEL IN PORT 1

SECURITY LEVEL OF THE VESSEL 1

ANY ADDITIONAL MEASURES TO BE TAKEN DUE TO SECURITY ALERTS :

NA

AT SEA

1. is the vessel expected to pass through Piracy prone area ? **No**
2. Is the SSAS in good working order ? **Yes**

   Date of last testing of SSAS: 10/Feb/18
3. Are all security equipment in good working order ? **Yes**
   (AIS / Torches / Night vision binoculars /Additional lights/ Radar etc)
4. Have Anti Piracy watches been planned and relevant duties explained to staff on board ? **Not applicable**
5. Give brief description of areas which require high vigilance :

NA

Select from List
Yes
No
Not applicable

Section 9: Environ

M.V/M.T M T CELSIUS MALAGA

Voyage No:

(Reminder: Master to get latest local regulations from agents well in advance in order to comply fully with all local regulations in good time)

1) Is the vessel expected to enter MARPOL Annex 1 special areas enroute ? **No**

Sr. No.	MARPOL ANNEX 1 AREAS	DATE /TIME OF ENTRY
1		
2		
3		
4		
5		
6		

2) Is the vessel expected to enter MARPOL Annex 5 special areas **No**

Sr. No.	MARPOL ANNEX V AREAS	DATE/ TIME OF ENTRY
1		
2		
3		
4		
5		
6		

3) Is the vessel expected to enter SECA/ECA/EU Directive/Turkey **No**

Sr. No.	ECA/ECA/EU,CARB AREAS, HK / CHINA EC	DATE / TIME OF ENTRY
1		
2		
3		
4		

4)	Does the vessel have sufficient LSFO (MGO for California) for its	**No**
5)	Is the vessel calling a port in the USA?	**No**
6)	If answer to above is 'Yes', select the US state from the list. Main	

7) With effect from 8th September 2017, due to the Ballast Water Management Convention coming into force, it is MANDATORY to

8) Select the Country / Area of the destination port from list in the next | UNITED STATES OF AMERICA

9) #N/A

10) Has the vessel been supplied with refractometer and is it in working | Yes

11) If trading on US East Coast (Southeastern Atlantic and mid-Atlantic | Yes

ports each year in the following approximate locations at the following times.)

Area | Not applicable

Chief Officer

Select from List
Yes
No
Not Applicable

Marpol Annex 1	PSSA
Select from list	**Select from list**
The Mediterranean sea area	The Great Barrier Reef, Australia
The Baltic sea Area	The Sabana-Camagüey Archipelago in Cuba
The Black sea area	Malpelo Island, Colombia
The Red sea area	The Sea around the Florida Keys, United States
The Gulfs - NW of line joining Ras Al Hadd and Ras Al Fasteh	The Wadden Sea, Denmark, Germany, Netherlands
The Gulf of Aden Area	Paracas National Reserve, Peru
The Antarctic area	Western European Waters
NW European Waters	Extension of the existing Great Barrier Reef PSSA to include the Torres Strait
The Oman area of the Arabian sea	Canary Islands, Spain
	The Galapagos Archipelago, Ecuador

Southern South Africa

The Baltic Sea area, Denmark, Estonia, Finland, Germany, Latvia, Lithuania, Poland and Sweden

The Papahānaumokuākea Marine National Monument, United States

Not applicable

Strait of Bonifacio - France and Italy

Marpol Annex V

Select from list

The Mediterranean sea area

The Baltic sea Area

The Black sea area

The Red sea area

The Gulfs - NW of line joining Ras Al Hadd and Ras Al Fasteh

The North Sea Area

The Antarctic area (South of 60 deg S)

Wider Caribbean region

Not applicable

Not applicable

Seca

Select from list

Baltic Sea

North Sea

English Channel

Areas covered by EU Directive

North American ECA

Caribbean Sea ECA

China ECA - Pearl River Delta

China ECA - Yangtze River Delta

China ECA - Bohai Rim

Hong Kong ECA

California CARB area

Not Applicable

Right whale areas

Select from list

Southeastern US areas, from St. Augustine, Florida. to Brunswick, Georgia, from November 15 to April 15.

Mid-Atlantic US areas, from Rhode Island to Georgia, from November 1 to April 30

Cape Cod Bay, from January 1 to May 15.

Off Race Point at the northern end of Cape Cod, from March 1 to April 30.

Great South Channel of New England, from April 1 to July 31.

Not applicable

PSSA

The Great Barrier Reef, Australia

Extension of the existing Great Barrier Reef PSSA to include the Torres Strait

Extension of Great Barrier Reef and Torres Strait to encompass the south-west part of the Coral Sea

The Wadden Sea, Denmark, Germany, Netherlands

Western European Waters

Canary Islands, Spain

The Baltic Sea area, Denmark, Estonia, Finland, Germany, Latvia, Lithuania, Poland and Sweden

The Strait of Bonifacio, France and Italy

The Sabana-Camaguey Archipelago in Cuba

Malpelo Island, Colombia

The sea around the Florida Keys, United States

Paracas National Reserve, Peru

The Galapagos Archipelago, Ecuador

The Papahanaumokuakea Marine National Monument, United States

The Saba Bank, in the North-eastern Caribbean area of the Kingdom of the Netherlands
N/A

mental requirements

› undertake Ballast Water Management (BWM) prior pumping out Ballast in ANY port. Agents at next port of call must be asked for

Chief Engineer

MAIN ANNEX 1 SPECIAL AREA REQUIREMENTS 1)
ODME use is prohibited - no decanting operations allowed. 2)
Discharge to sea of dirty ballast is prohibited.

MAIN ANNEX 5 SPECIAL AREA REGULATIONS 1)
Discharge to sea of dry cargo residues (except when entrained in wash water) prohibited. 2)
Discharge to sea of dry cargo residues and Hold cleaning additives that are Hazardous to the marine environment (HME) prohibited. 3) Discharge to sea of dry cargo residues in wash water permitted only if no adequate reception facilities at port of departure and arrival, residues are non-HME, vessel is en route and more than 12nm from nearest land and as far as practicable.
4) Discharge to sea of food wastes prohibited unless vessel is more than 12 nm from nearest land, en route and has comminuted the wastes.

MAIN REQUIREMENTS (CONSULT QMS-90A FOR DETAILS)
1) Prior entry into SECA/ECA, changeover to max 0.1% S fuel must be completed.
2) When exiting SECA / ECA, changeover to high Sulphur may be commenced ONLY after exit.
3) If calling ANY EU or Turkey port, only max 0.1% S fuel is allowed to be burnt while at anchor or at berth. This DOES NOT apply when transiting the Turkish straits or awaiting Pilot for transiting the straits. If vessel will be at anchor or berth for less than 2 hrs, it is not necessary to change to LSFO.
4) Ships constructed (keel-laying date) on or after 1 Jan 2016 must use Tier III NOx reduction in all marine diesel engines when within NOx ECAs (currently the North American and Caribbean ECAs).
5) If calling any port in one of the three China ECAs, only fuel of max 0.5% S may be burnt while at berth (between 1 hour after berthing and 1 hr prior departure). Effective 01 Jan 2019, only max 0.5% S may be burnt while the ship is within the ECA limits - including in the Main Engine.
6) If calling Hong Kong (until 31 Dec 2018), the above requirement also applies while at anchor.
7) If calling a port in California, prior entering the 24 nm limit from nearest Californian land, vessel must change to max 0.1% S DISTILLATE FUEL (if using low sulphur residual fuel). If there is only max 0.1% residual fuel on board, California authorities must be informed prior entry into the 24 nm limit.

Alabama

Alaska

California

Connecticut

Delaware

Florida

Georgia

Hawaii

Illinois

Indiana

Louisiana

Maine

Maryland

Massachusetts

Michigan

Minnesota

Mississippi

New Hampshire

New Jersey

New York

North Carolina

Ohio

Oregon

Pennsylvania

Rhode Island

South Carolina

Texas

Virginia

Washington

Wisconsin

American Samoa

Guam

Northern Mariana Islands

Puerto Rico

U.S. Virgin Islands

Albania
Algeria

Antarctic

Argentina

Argentina - Buenos Aires

Australia
Bahrain
Belgium

Brazil
Canada

Chile

China
Croatia

Denmark

Egypt

Estonia

Finland
France

Georgia
Germany
Great Britain
Greece
Iran
Iraq
Israel and the Occupied Territories
Italy
Kuwait

Latvia
Lebanon
Libya

Lithuania
Malta

Mediterranean Sea Area
Morocco
Netherlands

New Zealand

North-east Atlantic & the Baltic Sea

North Sea Ballast Water Exchange areas

Norway
Oman
Panama

Persian Gulf

Peru
Poland
Qatar

Russian Federation
Saudi Arabia
Serbia
Slovenia

Korea, Republic of (South Korea)
Spain
Sweden
Tunisia
Turkey

Ukraine
United Arab Emirates
United Kingdom

United Kingdom - Orkney Islands

United States of America (USA)

VGP: 1) A valid Notice of Intent (NOI) must be on board. 2) A copy of the latest Annual Report made by the Company, must be on board. 3) The vessel must have completed the Annual Inspection (refer to VGP log) within the past 12 months and a Dry-dock inspection must have been done in the last Dry-Dock. 4) Environmentally Acceptable Lubricants (EAL) must be used for oil-sea interfaces including in oil-lubricated stern tubes (unless fitted with an air seal), Bow Thruster hydraulic fluid and CPP hydraulic fluid. Certificates must be available.
BALLAST: 1) If vessel is past its 'compliance date' or 'extended compliance date', the use of a BWTS is ESSENTIAL for all ballast to be discharged or loaded in US waters. 2) Ballast water exchange (BWE) for such a vessel is NOT an acceptable option. 3) If the BWTS is not operational, the USCG Captain of the Port (COTP) MUST be informed as soon as possible and permission MUST be taken to perform a BWE as an alternative to the BWTS. 4) In addition, permission MUST also be taken to discharge ballast that has been exchanged in lieu of the BWTS. 5) If the 'compliance date' has not yet been reached, ballast MUST be exchanged more than 200 nm from nearest land and outside the US EEZ - some states have additional exchange requirements. 6) EXCEPT for vessels calling California, the Great Lakes or the Hudson River North of the George Washington Bridge, if a vessel will not remain outside the 200nm limit from nearest land for a sufficient period of time to be able to conduct a full BWE, it is NOT necessary to deviate or delay the voyage for completing the BWE. In such cases, a ROUTE EXEMPTION may be sought from the USCG and the appropriate remark must be selected in the Ballast Water Reporting Form for all tanks that have not been exchanged more than 200nm from nearest land. However, tanks that can be exchanged outside 200nm must be so exchanged and the remaining tanks exchanged at least more than 50nm from nearest land. 7) Empty ballast tanks MUST be flushed with mid-ocean sea water, if they may be ballasted and later de-ballasted in a U.S. port, unless the residual ballast was from a mid-ocean source or was treated by a BWTS. 8) The Ballast Water Report MUST be sent to NBIC for each US port of call within 6 hrs of arrival in port (except for vessels calling California, Great Lakes and Hudson River, where the report must be sent 24 hrs prior
VGP: 1) A valid Notice of Intent (NOI) must be on board. 2) A copy of the latest Annual Report made by the Company, must be on board. 3) The vessel must have completed the Annual Inspection (refer to VGP log) within the past 12 months and a Dry-dock inspection must have been done in the last Dry-Dock. 4) Environmentally Acceptable Lubricants (EAL) must be used for oil-sea interfaces including in oil-lubricated stern tubes (unless fitted with an air seal), Bow Thruster hydraulic fluid and CPP hydraulic fluid. Certificates must be available.
BALLAST: 1) If vessel is past its 'compliance date' or 'extended compliance date', the use of a BWTS is ESSENTIAL for all ballast to be discharged or loaded in US waters. 2) Ballast water exchange (BWE) for such a vessel is NOT an acceptable option. 3) If the BWTS is not operational, the USCG Captain of the Port (COTP) MUST be informed as soon as possible and permission MUST be taken to perform a BWE as an alternative to the BWTS. 4) In addition, permission MUST also be taken to discharge ballast that has been exchanged in lieu of the BWTS. 5) If the 'compliance date' has not yet been reached, ballast MUST be exchanged more than 200 nm from nearest land and outside the US EEZ - some states have additional exchange requirements. 6) EXCEPT for vessels calling California, the Great Lakes or the Hudson River North of the George Washington Bridge, if a vessel will not remain outside the 200nm limit from nearest land for a sufficient period of time to be able to conduct a full BWE, it is NOT necessary to deviate or delay the voyage for completing the BWE. In such cases, a ROUTE EXEMPTION may be sought from the USCG and the appropriate remark must be selected in the Ballast Water Reporting Form for all tanks that have not been exchanged more than 200nm from nearest land. However, tanks that can be exchanged outside 200nm must be so exchanged and the remaining tanks exchanged at least more than 50nm from nearest land. 7) Empty ballast tanks MUST be flushed with mid-ocean sea water, if they may be ballasted and later de-ballasted in a U.S. port, unless the residual ballast was from a mid-ocean source or was treated by a BWTS. 8) If vessel is calling an Alaska port that is East of 154 deg W longitude and has ballast water sourced from within 50nm of the coast in the Pacific Coast Region (North of 25 deg N, exclusive of the Gulf of California and East of 154 deg W), it must be exchanged more than 50nm from nearest land and in depth more than 200 metres, prior deballasting in the Alaskan port. 9) The Ballast Water Report MUST be sent to NBIC for each US port of call within 6 hrs of arrival in port (except for vessels calling California, Great Lakes and Hudson River, where the report must be sent 24 hrs prior arrival). 10) Crew training for relevant staff in BWTS operation and maintenance must be documented.
GRAYWATER: The VGP requires that vessels that are equipped with tanks designated for the storage of Graywater, must store the Graywater when within 1 nm from nearest land in the USA, until the tank capacity is reached. If Graywater is discharged overboard, only phosphate-free soaps and detergents may form part of the Graywater and cooking oils must be eliminated from Graywater to the extent practicable. Graywater discharge to sea must also be minimized through 'Best Management Practices' including controlling the use of laundries, showering for less time, etc.
SEWAGE: A full list and maps showing the extent of No Discharge Zones (NDZ) in USA may be obtained from the following link: https://www.epa.gov/vessels-marinas-and-ports/no-discharge-zones-ndzs-state. Discharge of any type of sewage,including treated sewage effluent, is prohibited within a NDZ.

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BIO-FOULING MANAGEMENT: **1)** vessels that arrive at California ports must submit the Marine Invasive Species Program Annual Vessel Reporting Form once annually, at least 24 hours in advance of the first arrival of each calendar year. 9) Crew training for relevant staff in BWTS operation and maintenance must be documented.

GRAYWATER: **1)** The VGP requires that vessels that are equipped with tanks designated for the storage of Graywater, must store the Graywater when within 1 nm from nearest land in the USA, until the tank capacity is reached. If Graywater is discharged overboard, only phosphate-free soaps and detergents may form part of the Graywater and cooking oils must be eliminated from Graywater to the extent practicable. Graywater discharge to sea must also be minimized through 'Best Management Practices' including controlling the use of laundries, showering for less time, etc. **2)** When passing through the National Marine Sanctuaries (in the approaches to San Francisco), Graywater shall be stored if the vessel has the capacity to store it.

SEWAGE: **1)** All waters upto 3 nm from the Californian coast (called California Marine Waters) are a 'special NDZ'. When within these waters, if the vessel has a designated storage tank for sewage effluent (including a tank that has been temporarily approved by Class for such storage), this must be stored until the tank is full. Thereafter, treated sewage may be discharged overboard provided the vessel is not located in a 'full' NDZ and provided that the storage tank was empty at the time when the vessel entered California Marine Waters. **2)** When passing through the National Marine Sanctuaries (in the approaches to San Francisco), ALL SEWAGE MUST be stored. **3)** If calling San Francisco, the tanks in which Graywater and treated sewage are stored while passing through the National Marine Sanctuaries MUST be emtied out between the limit of the

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time within the past month, a ballast exchange or saltwater flushing in mid ocean must be conducted in accordance with the exchange requirements given above, despite the use of a BWTS, in order to ensure that ballast in the tanks has a salinity of at least 30 parts per
thousand).8) Any vessel discharging ballast water employing ballast water treatment systems using chlorine, shall not exceed a maximum total residual chlorine limit of 0.05 mg/1. 9) The Ballast Water Report MUST be sent to NBIC and the COTP Buffalo, 24 hrs prior arrival at Montreal, Quebec 10) Crew training for relevant staff in BWTS operation and maintenance must be documented.

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See 'Mediterranean Sea Area'

For vessels needing to discharge ballast water within the Antarctic Treaty area, ballast water should first be exchanged before arrival in Antarctic waters (preferably north of either the Antarctic Polar Frontal Zone or 60oS, whichever is the furthest north) and at least 200nm from the nearest land in water at least 200 metres deep. (If this is not possible for operational reasons then such exchange should be undertaken in waters at least 50nm from the nearest land in waters of at least 200 metres depth).

If the safety of the ship is in any way jeopardised by a ballast exchange, it should not take place. Additionally these guidelines do not apply to the uptake or discharge of ballast water and sediments for ensuring the safety of the ship in emergency situations or saving life at sea in Antarctic waters. Only those tanks that will be discharged in Antarctic waters would need to undergo ballast water exchange following the procedure above. Ballast water exchange of all tanks is encouraged for all vessels that have the potential/capacity to load cargo in Antarctica, as changes in routes and planned activities are frequent during Antarctic voyages due to changing Meteorological and sea conditions.

If a vessel has taken on ballast water in Antarctic waters and is intending to discharge ballast water in Arctic, sub-Arctic, or sub- Antarctic waters, it is recommended that ballast water should be exchanged north of the Antarctic Polar Frontal Zone, and at least 200nm from the nearest land in water at least 200 metres deep. (If this is not possible for operational reasons then such exchange should be undertaken in waters at least 50nm from the nearest land in waters of at least 200 metres depth.)
For vessels that have spent significant time in the Arctic, ballast water sediment should preferably be discharged and tanks cleaned before entering Antarctic waters (south of

BALLAST WATER EXCHANGE:

a) Ballast water exchange (BWE): to be conducted in open-sea following the IMO approved methods, i.e. total ballasting and de-ballasting, flow-through, or over-flow or sequential exchange. Note: salinity levels following BWE must not be below 30mg/cm3.
b) Treatment system/ballast discharge standard: Alternative methods of treatment methods are allowed under strict guidance and approval from either the IMO or the administration, details of which are found in Section 8 and Annex 1 of the ORDENANZA Nº 7-98.
c) Theoretically, ballast water should warm at values ranging from 35oC to 45oC, and remain this way for a certain time.

SAMPLING:

Prefectura Naval Argentina may take samples of the content of ballast tanks, pipes, and pumps to control, by means of the methodology deemed more convenient, the presence of aquatic harmful organisms, and to verify that the specifications of the regulations have been complied with. They may seal ballast water tanks and/or pump control valves of ships to assure that ballast water that is not exchanged in open sea, is not discharged on the way to Argentine ports of the River Plate Basin.

BALLAST WATER MANAGEMENT PLAN:

A Ballast Water Management Plan must be carried on board with a record/log of all ballast water exchange and operations to be maintained and available for inspection.

RECORDS AND REPORTING:

Captains should record:

- Ship position, date and hour of commencement
- Amount of water discharged or exchanged
- Place of origin of discharged ballast
- Identification and capacity of ballast tanks used in operation (including emergency)
- Method applied for ballast exchange
- Ship position, date and hour of conclusion.

PROCEDURE FOR UNACCEPTABLE BALLAST WATER

Administrative penalties to the responsible persons. If the captains allege a lack of knowledge, the Maritime Agencies shall justify compliance with this provision with Prefectura. Lack of evidence shall imply concurrent liability for omission of the relevant Maritime Agent.

ADDITIONAL USEFUL INFORMATION:

Ships shall refrain from cleaning ballast tanks or removing sediments in the zone of polluting actions prohibition located in front of the River Plate external limit, and in river

Buenos Aires
SHIPS AFFECTED:
Ships arriving from areas where cholera is endemic.
IMPLEMENTATION:
Mandatory
ACCEPTABLE METHODS:
Ships are required to treat ballast water with chlorine through air pipes if ballast has been taken up in a World Health Organisation (WHO) listed cholera high risk area. Chlorine dilution is specified as 50 litres of chlorine to 100 tonnes of ballast water or 15 parts per million. It is understood that if the vessel has no chlorine it can be provided at the Racalada pilot station.
SAMPLING:
Random sampling may be undertaken by Argentine authorities.
ADDITIONAL USEFUL INFORMATION:
Ships should note that new regulations are introduced under Ordinance No. 12-97, dated 7 January, 1998, entitled Rules for the Protection of the Environment. The regulations designate coastal areas in which discharge of ballast water is prohibited. The areas in question are generally small and mostly comprise enclosed bays. Ships should seek the latest information from their agents prior to arrival.

A) ACCEPTABLE METHODS OF BALLAST WATER MANAGEMENT:

1) Ballast water must be managed (Ballast Water Exchange or Ballast Water Treatment, depending on the method authorised in the Ballast Water Management Convention certificate) by all vessels calling Australian ports. THIS APPLIES ALSO TO VESSELS TRADING BETWEEN AUSTRALIAN PORTS, EXCEPT WHEN THE TWO PORTS ARE LOCATED WITHIN 'SAME RISK AREAS' AS DEFINED IN THE AUSTRALIAN BALLAST WATER REGULATIONS. IF THE TWO PORTS ARE WITHIN THE GREAT BARRIER REEF ZONE AND BALLAST WATER WAS TAKEN ON AT A PORT WITHIN THE ZONE, IT NEED NOT BE EXCHANGED (HOWEVER, IF THE VESSEL IS USING BWTS AS THE PRIMARY MEANS OF MANAGEMENT, THEN THIS MUST BE USED).
2) Ballast Water should preferably be exchanged 200 / 50 miles from nearest land at a depth greater than 200m but if this is not possible, it may be exchanged at least 12 miles from nearest land in depths greater than 50m. HOWEVER, EXCHANGE LESS THAN 12 MILES FROM THE BOUNDARY OF THE GREAT BARRIER REEF IS NOT ALLOWED - FROM THE NEAREST LAND OFF THE NORTH-EASTERN COAST OF AUSTRALIA MEANS FROM A LINE DRAWN BETWEEN THE CO-ORDINATES GIVEN IN MARPOL ANNEXES 1 AND 5.

B) SAMPLING:

The department officers will conduct ballast water verification inspections on-board vessels to ensure compliance with Australia's ballast water management requirements.
The department officers will use the Ballast Water Report (BWR), the BWMS and the vessel's deck, engineering and ballast water management logs to verify that the information supplied to the department is correct.
The verification inspection will take around 30 minutes to complete and in most cases will be conducted at the same time as a routine vessel inspection. Targeted, random and mandatory, under supervision of a Department of Agriculture officer.

C) RECORDS AND REPORTING:

The BWR must be submitted to the Department for Agriculture or Maritime National Coordination Centre between 12-96 hours prior to entering Australian water. The BWR requires Masters to declare whether or not they have complied with Australia's mandatory Ballast Water Management Requirements. Masters must also complete the 'Ballast Water Management Summary' (form 26) with details about ballast water uptake ports, ocean exchanges. This must be separate to the deck log and be available for inspection by a biosecurity officer during an on-board inspection by a biosecurity officer. The details on the Ballast Water Management Summary form should be a duplication of the vessels own ballast water recordings from the vessels log book or ballast log. These must be submitted to the Department of Agriculture with the BWR if the vessel plans to discharge ballast water in Australian waters.
Record time, dates location, volume and salinity of all ballast water loaded, exchanged at sea, and discharged.

D) PROCEDURE FOR UNACCEPTABLE BALLAST WATER:

See 'Persian Gulf'
See 'North Sea Ballast Water Exchange Areas'.

1. Conduct Ballast Water Exchange using the methods included in the BWMP, so as to achieve at least 95% volumetric exchange.
2. The exchange must take place in an area no less than 200 nautical miles from the coast and in a water depth of 200 metres or more. If this is not possible exchange may take place at least 50 nautical miles from the coast and in a water depth of at least 200 metres. If this requirement cannot be met, discharge may only take place with the permission of the Harbour Master or his agent.
3. Ships entering the Amazon River from international voyages or from other hydrographical region are required to undertake two water ballast exchanges as follows. The first exchange is to be as detailed in point 2 above and the second is to reduce the salinity of the ballast water between the 20 metres isobars contour and Macapá. When the ballast volume is less than 5,000 cubic metres the additional exchange should be carried out at the mouth of the Jari river. In this second exchange it will be necessary only to pump the tank volume once. The same applies to the River Para for which the second exchange must conducted at least 60 nautical miles from Salinópolis as far as the lighthouse of
1) The following requirements apply to all ships, EXCEPT a) Vessels that operate exclusively in waters under Canadian jurisdiction, b) Vessels that operate exclusively in waters under Canadian jurisdiction and in the United States waters of the Great Lakes Basin or the French waters of the islands of Saint Pierre and Miquelon.
2) Ballast water that is taken on board a vessel outside waters under Canadian jurisdiction (waters under Canadian jurisdiction means Canadian waters and waters in the exclusive economic zone of Canada).must be managed (exchanged or treated).
3) Exception: similar waters: Ballast water that is taken on board a vessel in the United States waters of the Great Lakes Basin or in the French waters of the islands of Saint Pierre and Miquelon need not be managed unless it is mixed with other ballast water that was taken on board the vessel in any other area outside waters under Canadian jurisdiction and was not previously subjected to a management process.
4) In respect of a vessel that exchanges ballast water and, during the course of its voyage, navigates more than 200 nautical miles from shore where the water depth is at least 2 000 m, Ballast water that is taken on board a vessel outside waters under Canadian jurisdiction must not be released in waters under Canadian jurisdiction unless an exchange is conducted, before the vessel enters those waters, in an area at least 200 nautical miles from shore where the water depth is at least 2 000 m.
5) Exception — Laurentian Channel: If, in respect of a voyage to a port, offshore terminal or anchorage area in the Great Lakes Basin, St. Lawrence River or Gulf of St. Lawrence, the requirements of point 4) above cannot be met because doing so would compromise the stability or safety of the vessel or the safety of persons on board the vessel, the Minister must be notified as soon as possible. After notice is provided, an exchange may be conducted, beginning on December 1 and ending on May 1, in an area in the Laurentian Channel east of 63° west longitude where the water depth is at least 300 m.
6) Alternative exchange areas: If the requirements in point 4) cannot be met because doing so is infeasible or would compromise the stability or safety of the vessel or the safety of persons on board the vessel, an exchange may be conducted in the following areas in waters under Canadian jurisdiction: (a) in respect of a voyage to a port, offshore terminal or anchorage area on the east coast of Canada, an area south of 43°30′ north latitude where the water depth is at least 1 000 m; (b) in respect of a voyage to a port, offshore terminal or anchorage area on the west coast of Canada, an area at least 50 nautical miles west of Vancouver Island and the Queen Charlotte Islands and at least 50 nautical miles west of a line extending from Cape Scott to Cape St. James where the water depth is at least 500 m, with the exception of waters within 50 nautical miles of the Bowie Seamount (53°18′ north latitude and 135°40′ west longitude); (c) in respect of a voyage to a port, offshore terminal or anchorage area in Hudson Bay, an area in Hudson Strait east of 70° west longitude where the water depth is at least 300 m; and (d) in respect of a voyage to a port, offshore terminal or anchorage area in the High Arctic, an area in Lancaster Sound east of 80° west longitude where the water depth is at least 300 m.
7) Exception — west coast: If, in respect of a voyage to a port, offshore terminal or anchorage area on the west coast of Canada, the requirements of paragraph 6(b) above cannot be met because doing so is infeasible or would compromise the stability or safety of the vessel or the safety of persons on board the vessel, an exchange may be conducted in an area at least 45 nautical miles west of Vancouver Island and the Queen Charlotte Islands and at least 45 nautical miles west of a line extending from Cape Scott to Cape St. James where the water depth is at least 500 m, with the exception of waters within 50 nautical miles of the Bowie Seamount (53°18′ north latitude and 135°40′ west longitude).
8) If a vessel that is to exchange ballast water does not, during the course of its voyage, navigate more than 200 nautical miles from shore where the water depth is at least 2 000 m, ballast water that is taken on board a vessel outside waters under Canadian jurisdiction must not be released in waters under Canadian jurisdiction unless an exchange is conducted, before the vessel enters those waters, in an area at least 50 nautical miles from shore where the water depth is at least 500 m.
9) Alternative exchange areas: If the requirements of point 8 above cannot be met because doing so is infeasible or would compromise the stability or safety of the vessel or the

safety of persons on board the vessel, an exchange may be conducted in the following areas in waters under Canadian jurisdiction: (a) in respect of a voyage along the east
1. Ballast Water Exchange must be carried out as per the requirements of the Ballast Water Management Convention and by following the procedures in the Ballast Water Management Plan.
2. Alternatives to en route management procedures: In-tank treatment before discharge, by addition of 100 grams of powdered sodium hypochlorite, or 14 grams of powdered calcium hypochlorite per tonne of ballast water, ensuring thorough mixing, and then allowing 24 hours before beginning discharge of the treated ballast water.
Off the coast of China, for the purpose of the application of the MARPOL Annexes, the term 'nearest land' should be taken to mean a line described as 'China Straight Baseline' - refer to the co-ordinates of the Baseline given in the Garbage Management Plan. All areas shoreward of the Baseline are considered as internal waters of China where no waste can be discharged overboard. Permitted wastes only may be discharged at appropriate distances from the 'China Straight Baseline' as given in the MARPOL Annexes.
TIANJIN PORT - PREVENTION AND CONTROL OF SHIP POLLUTION
1) The use of INCINERATORS within Tianjin port is PROHIBITED.
2) Ships staying in Tianjin port forr more than 30 days must lead-seal pollutants discharge equipment.
3) Deck washing is prohibited if the deck is contaminated with pollutants or if the vessel is located in special protection zones, i.e. marine nature reserves, marine special
Refer to 'Mediterranean Sea Area'.
See 'North Sea Ballast Water Exchange Areas'.
INCINERATOR USE PROHIBITED: Use of the Incinerator is prohibited while in the Baltic sea.
Alexandrian Port Authorities require the Master to prepare a letter requesting ballast discharge to include, the number of tanks and quantity of ballast water to discharge and a statement that the ballast water was changed in the Mediterranean Sea. Permission will be required prior to discharge. Samples may be taken.
INCINERATOR USE PROHIBITED: Use of the Incinerator is prohibited while in the Baltic sea.
BALLAST: See 'North east Altlantic and the Baltic Sea'
INCINERATOR USE PROHIBITED: Use of the Incinerator is prohibited while in the Baltic sea.
BALLAST: See 'North east Altlantic and the Baltic Sea'
See 'North Sea Ballast Water Exchange Areas'.
1. Ballast water exchange (BWE): BWE must be conducted in the Black Sea.
2. Ballast water treatment may be accepted.
See 'North Sea Ballast Water Exchange Areas'.
See 'United Kingdom'
Refer to 'Mediterranean Sea Area'.
See 'Persian Gulf'
See 'Persian Gulf'
Refer to 'Mediterranean Sea Area'.
Refer to 'Mediterranean Sea Area'.
See 'Persian Gulf'
INCINERATOR USE PROHIBITED: Use of the Incinerator is prohibited while in the Baltic sea.
BALLAST: See 'North east Altlantic and the Baltic Sea'
Refer to 'Mediterranean Sea Area'.
Refer to 'Mediterranean Sea Area'.

1) Butinge oil terminal, Klaipeda: Prior to ship's entry into the port, a ship shall replace her ballast water with the Baltic Sea or North Sea waters except ships arriving from the Baltic Sea ports.
2) Ballast Water Exchange (BWE): BWE should be conducted so as discharge into Butinge and/or Klaipeda is Baltic or North Sea water. No specific details on methodology are given although the IMO Guidelines are advised in the Helsinki Commission (HELCOM) recommendation.
Refer to 'Mediterranean Sea Area'.

a) Ballast water exchange: exchange ballast water before entering the Mediterranean Sea or after leaving the Mediterranean Sea to meet the regulation D-1 standard of the Ballast Water Convention. Exchange should be carried out at least 200 nautical miles from land and in waters at least 200 metres deep. The sequential, flow-through or dilution methods of ballast water exchange are accepted as meeting the D-1 standard.
b) When engaged in traffic between the ports and areas listed below, ships should undertake ballast water exchange in waters at least 50 nautical miles from the nearest land and at least 200 metres deep or in an area designated by a port state:
• Ports located within the Mediterranean Sea area
• A port located in the Black Sea area and a port located in the Red Sea area
• A port located in the Black Sea and a port located in the Mediterranean Sea area
• A port located in the Red Sea area and a port located in the Mediterranean Sea area.
Sediments collected during cleaning or repair of ballast tanks should be delivered to sediment reception facilities or be discharged to the sea beyond 200 nautical miles from the nearest coastline when the ship is sailing in the Mediterranean Sea area.

Refer to 'Mediterranean Sea Area'.
See 'North Sea Ballast Water Exchange Areas'.

1) All ships entering New Zealand territorial seas carrying ballast water loaded within the territorial water of another country must conduct Ballast water exchange at mid ocean position at least 200 nautical miles from land and over 200m deep. Accepted techniques are either emptying and refilling ballast tanks/holds with an efficiency of 95% volumetric exchange or pumping through the tanks a water volume equal to at least three times the tank capacity. Tanks should be pumped no more than two at a time and, if two tanks are pumped together, they should be a symmetrical pair of tanks to ensure the safety of the vessel.
2) Alternative method: Use of an approved shipboard treatment system (from the list of MPI-approved ballast treatment systems – see: http://www.mpi.govt.nz/news-and-resources/resources/registers-and-lists/ballast-treatment/). 3) Masters are expected to use their discretion and care when loading ballast water, avoiding where possible, taking ballast in shallow water, or in areas where there are known to be active algal blooms or an outbreak of any disease communicable through ballast water.
4) From 01 May 2018, vessels are required to arrive at New Zealand with a 'clean hull'.
5) A hull is considered to be a ‘clean hull’ when no biofouling of live organisms is present other than that within the thresholds below (these apply to vessels staying for up to 20 days). ALL HULL SURFACES (allowable bio-fouling): Slime layer; Goose barnacles.
WIND AND WATER LINE: Green algae growth of unrestricted cover and no more than 50 mm in frond, filament or beard length; Brown and red algal growth of no more than 4 mm in length;
Incidental (maximum of 1%) coverage of one organism type of either tubeworms, bryozoans or barnacles, occurring as: a) isolated individuals or small clusters; and b) a single species, or what appears to be the same species.
HULL AREA: Algal growth occurring as: a) no more than 4 mm in length; and b) continuous strips and/or patches of no more than 50 mm in width.
Incidental (maximum of 1%) coverage of one organism type of either tubeworms, bryozoans or barnacles, occurring as: a) isolated individuals or small clusters that have no algal overgrowth; and b) a single species, or what appears to be the same species. NICHE AREAS: Algal growth occurring as: a) no more than 4 mm in length; and b) continuous strips and/or patches of no more than 50 mm in width.
Scattered (maximum of 5%) coverage of one organism type of either tubeworms, bryozoans or barnacles, occurring as: a) widely spaced individuals and/or infrequent, patchy clusters that have no algal overgrowth; and b) a single species, or what appears to be the same species; and
Incidental (maximum of 1%) coverage of a second organism type of either tubeworms, bryozoans or barnacles, occurring as: a) isolated individuals or small clusters that have no algal overgrowth; and b) a single species, or what appears to be the same species. 6) One of the following measures must be applied to meet the 'Clean Hull' requirement:
a) Cleaning before visit to New Zealand, (or immediately on arrival in a facility or by a system, approved by MPI). All biofouling must be removed from all parts of the hull and this must be carried out less than 30 days before arrival to New Zealand or within 24 hours after time of arrival
b) Continual Maintenance using best practice including: application of appropriate antifoul coatings; operation of marine growth prevention systems on sea-chests; and in-water inspections with biofouling removal as required. Following the IMO Biofouling Guidelines is recognised as an example of best practice. AS A ROUGH ESTIMATE OF

SHIPS AFFECTED: All ships entering the waters** of contracting parties to the OSPAR and Helsinki Conventions, which are also IMO member states.
** WATERS OF CONTRACTING PARTIES: 'Waters' refers to: those parts of the Atlantic and Arctic Oceans and their dependent seas, including the Baltic Sea, which lie north of 36° north latitude and between 42° west longitude and 51° east longitude, but excluding the Mediterranean Sea and its dependent seas as far as the point of intersection of the parallel of 36° north latitude and the meridian of 5° 36' west longitude; and that part of the Atlantic Ocean north of 59° north latitude and between 44° west longitude and 42° west longitude. The Baltic Sea and the entrance to the Baltic Sea bounded by the parallel of the Skaw in the Skagerrak at 57 44.43'N.
OSPAR AND HELSINKI CONVENTION MEMBERS (who are also IMO members) are: Belgium, Denmark, Estonia, Finland, France, Germany, Latvia, Lithuania, Luxembourg, Iceland, Ireland, The Netherlands, Norway, Poland, Portugal, the Russian Federation, Spain, Sweden, Switzerland and the United Kingdom of Great Britain and Northern Ireland.
ACCEPTABLE BALLAST WATER MANAGEMENT METHODS: Exchange all ballast tanks at least 200 nautical miles from the nearest land in water at least 200 metres deep prior to entering the waters of OSPAR and Helsinki Convention Members and members of the IMO*.

This applies to vessels transiting the Atlantic, or entering the areas of the OSPAR and Helsinki Conventions from routes passing the West African Coast – it does not apply to vessels entering the area from the Mediterranean Sea. If exchange has not been undertaken as above, vessels will be expected to exchange in waters at least 200 nautical miles from the nearest land in water at least 200 metres deep within the North East Atlantic. (If this is not possible for operational reasons then such exchange should be undertaken as far from the nearest land as possible, and in all cases in waters at least 50 nautical miles from the nearest land and at least 200 metres deep).

APPLICABILITY: Ships that are on voyages between North Sea ports are required to manage Ballast water prior discharge using one of the acceptable methods. Ships that enter the North Sea from outside the area and choose to use the ballast water exchange method of management must exchange ballast in the Atlantic Ocean, keeping the required distance from land & depth of water required by the Ballast Water Managemet Convention.
PORTS AFFECTED: Belgium, Denmark, France, Germany, Norway, the Netherlands, Sweden and the United Kingdom.
ACCEPTABLE METHODS OF BALLAST WATER MANAGEMENT: 1) Treatment by an IMO approved BWTS (applicable where D-2 method is selected as an option on the BWM Convention certificate). 2) Ballast Water Exchange in the North Sea, except in the areas where ARI>0.75, as indicated on the map in BWM.2/Circ.56. This circular should be on board and included in Appendix 2 to the Ballast Water Management Plan. Ballast exchange is not allowed in areas that are coloured red, i.e. those with an average risk index
1) Ballast Water Exchange or Treatment by an IMO-approved BWTS is necessary for all ballast to be discharged in ports in Norway.
2) Ballast water exchange must be done as per the procedures in the Ballast Water Management plan.
3) If a ship cannot exchange ballast in the specified depth of water or at the required distance from land, it must be exchanged in one of three designated exchange areas off the Norwegian coast. For details of these areas please see Annex 1 of the Regulations. These areas are indicated in BWM.2/Circ.56.
4) Regulation of 7 July 2009 No. 992 concerning the prevention of transfer of alien organisms via ballast water and sediments from ships (the Ballast Water Regulation) can be downloaded from:
See 'Persian Gulf'
Ballast tanks shall not be discharged into Canal waters. Vessels wishing to load or unload ballast must have properly fitted chutes or spouts, built and located in such a way that
AUTHORITY: ROPME (Regional Organisation for the Protection of the Marine Environment).
ACCEPTABLE METHODS OF BALLAST WATER MANAGEMENT:
a) Vessels arriving from outside the ROPME Sea Area should undertake ballast water exchange en route in water over 200 nautical miles from the nearest land and in water at least 200 metres depth.
b) If this is not possible for safety reasons, then vessels should be expected to make minor deviations to areas within the 200 nautical miles limit that can be identified as discharge area, so long as such areas are more than 50 nautical miles from the nearest land in waters at least 200 metres depth.
c) If this is not achievable, then the ship shall provide the respective authority with the reason why she has not done so, and further ballast water management measures may be required, consistent with the Ballast Water Management Convention and other international laws.
d) Treat with IMO-approved system.

1) Ballast water exchange: All ships trading internationally proceeding from foreign ports that have on-board ballast water and which have Peruvian ports as destination or as port of calls must renew their ballast water at least once beyond 12 nautical miles off the coast before entering a Peruvian port. Every time it is possible they will carry out the cleaning of the ballast tanks to withdraw sediments.
2) A 'Ballast Water Notification' should be submitted to the Maritime Authority on arrival at the Port.
See ' North Sea Ballast Water Exchange areas'
See 'Persian Gulf'
It is reported that effective 1 May 2006, as per new port regulations, de-ballasting is permitted only if ballast has been taken from/changed in the Black Sea. Vessels may be prohibited from discharging unsuitable ballast water following sampling from Port State Control Inspectors and will be expected to exchange waters outside the EEZ before returning to port.
See 'Persian Gulf'
See 'Mediterranean Sea Area'
See 'Mediterranean Sea Area'
Vessels that have loaded ballast water within 50 miles of the Fukushima nuclear power plant or within the Japanese ports of Hachinohe, Ishinomaki, Sendai, Soma, Onahama and Hitachi, and visiting South Korean ports should perform a ballast water exchange operation in the open sea prior to entering a South Korean port.. The ballast water exchange operation should be carried out with an efficiency of at least 95% volumetric exchange of
See 'Mediterranean Sea Area'
See 'North Sea Ballast Water Exchange Areas'.
See 'Mediterranean Sea Area'
Discharge of Graywater and sewage (including treated sewage) is prohibited in Turkish waters. If there is no storage facility for these effluents, approval / temporary approval
1) Discharge of Graywater and sewage (including treated sewage) is subject to strict controls in Ukrainian ports. Operation of the Sewage Treatment Plant must be verified prior arrival and treated sewage effluent must be stored while the vessel is in Ukrainian waters. Graywater should be stored where the facility exists.
2) Hold wash water (on Bulk carriers) may be discharged in the Black Sea, as the MARPOL Annex V special area restrictions are not yet in force in the Black Sea, however this may be done ONLY outside the Ukrainian Exclusive Economic Zone. 3) When entering the Black Sea vessels with
See 'Persian Gulf'
See 'North Sea Ballast Water Exchange Areas'.

AUTHORITY: Orkney Islands Council Harbour Authority
PORTS AFFECTED: 29 piers and harbours located in the Orkney Islands, including Scapa Flow
SHIPS AFFECTED: All ships intending to conduct ballast water management and / or discharge within Scapa Flow, in particular:
a) All vessels over 400 gt within or using the Scapa Flow Oil Port or Anchorage Facility as defined by the harbour authority limits,
b) All vessels carrying out ship to ship oil or liquid gas operations within 500m (radius) of designated STS locations 1 to 4 as shown on United Kingdom Hydrographic Office Chart 35.
Liquid Petroleum Gas Carriers using Flotta Oil Terminal are subject to special ballast management agreements. See the OIC Harbour Authority Ballast Water Management Policy for Scapa Flow for further details.

ACCEPTABLE METHODS OF BALLAST WATER MANAGEMENT:
a) For vessels using the Flotta Oil Terminal jetty or Single Point Mooring (SPM) facilities: Discharge is only permitted through the ballast water reception and treatment facilities that are provided at the Flotta Oil Terminal.
b) Direct discharge to sea of their ballast water is only permitted in accordance with the following restrictions:
i. The total quantity of ballast water for discharge is limited to the minimum essential quantity possible.
ii. The ballast water for discharge must have been taken on-board or exchanged in accordance with IMO Resolution A.868 (20) Reg B-4 criteria. If this is not possible, then at least taken on-board or exchanged within 24 hours of arrival at Scapa Flow and a minimum of 12 nautical miles from the nearest land.
iii. The Master has formally requested and obtained written permission from the Harbour Authority to undertake specific de-ballast operations.
c) Direct discharge to sea of their ballast water is only permitted in accordance with the following conditions:
i. The total quantity of ballast water for discharge is limited to the minimum essential quantity possible.
ii. The ballast water for discharge must have been taken on-board or exchanged within the specific locations and in accordance with the circumstances and conditions identified within the agreement.
iii. The Master submits to the Harbour Authority prior to arrival a ballast water reporting form or similar indicating the times, quantities and positions of all ballast water intake operations and indicating those tanks to be discharged.
iv. The Master has on-board a valid copy of the ballast water management agreement.
See above for U.S. State-specific environmental requirements.
RIGHT WHALE PROTECTION AREAS: United States regulations for Right Whale Ship Strike Reduction are available on the NOAA Ship Strike website (http://www.nmfs.noaa.gov/pr/pdfs/shipstrike/compliance_guide.pdf). Right Whale protection areas require ships speeds to be limited to a maximum of 10 kts and these areas are imposed in certain parts of the waters adjoining the states of Massachusetts, Connecticut, New York, Virginia, North Carolina, South Carolina, Georgia, Florida and

Section 10: Contingencies

M.V./M.T.: M T CELSIUS MALAGA Voyage No: 26

1. Port / Place Of Refuge

List below possible 'Ports / Places of Refuge'. Vessel should have charts of sufficient scale approach these ports / places.

Ports / places of refuge should be ports / places where necessary assistance can be provided to the vessel for example assistance for Machinery repairs, Medical Assistance, discharging cargo for onward transshipment etc.

1	RECIFE
2	RIO DE JANEIRO
3	PORT OF SPAIN
4	JAMAICA
5	TEXAS CITY

2 General Precautions for the Voyage :

1.KEEP SHARP LOOKOUT 2. MONITOR FOR UKC, 3. AVOID ENTERING RESTRICTED AREAS AND NATURAL RESERVE AREA.

A1	The Great Barrier Reef, Australia	VGP (USA)
A2	Extension of the existing Great Barrier Reef PSSA to include the Torres Strait	Ukraine
B	Extension of Great Barrier Reef and Torres Strait to encompass the south-west part of the Coral Sea	Turkey
C	The Wadden Sea, Denmark, Germany, Netherlands	Other -
D	Western European Waters	No
U	Canary Islands, Spain	
	The Baltic Sea area, Denmark, Estonia, Finland, Germany, Latvia, Lithuania, Poland and Sweden	
	The Strait of Bonifacio, France and Italy	
	The Sabana-Camaguey Archipelago in Cuba	
	Malpelo Island, Colombia	
	The sea around the Florida Keys, United States	
	Paracas National Reserve, Peru	
	The Galapagos Archipelago, Ecuador	
	The Papahanaumokuakea Marine National Monument, United States	
	The Saba Bank, in the North-eastern Caribbean area of the Kingdom of the Netherlands	
	N/A	

Section 11: Departure Port - Passage from Berth to Pilot Station

M.V T CELSIUS MALAG

(If there are a large number of way-points, an ECDIS printout of way-points may be attached to this section instead of typing in all way-points on this sheet. In this case, only waypoints representing minimum depths / CATZOC values / tidal heights need be inserted in this sheet, in order to calculate UKC). Short-cut formulae used for squat. For more accurate squat estimation, use UKC calculation sheets.

Voyage No. 26

WP	Name/ Reference	Latitude			Longitude			T/CO	DIST	LAT	DLAT	MP	DMP	LONG	DLO	RL/CO	DTG	Position Checking Interval Instr. 15	Bridge manning Level Instr. 27	UKC CALCULATION AT EVERY WAY POINT (mtr)						CATZOC DEPTH CAUTION see Instr. 20	REMARKS (ex. Cross-track distances, P.I. distances, etc.)	Confined 2, open 1	Squat	CATZOC Value	REQD UKC	UKC Warning	UKC Warning text	warning	CATZOC
		Deg	Min	'N/S	Deg	Min	'E/W													Static Draft+Roll/ Pitch/Heave. NO SQUAT.	Height of Tide	Intended transit Speed	Min. Charted Depth	CATZOC Instr. 18	UKC Instr. 19										
0	BERTH	23*	55.408'	S	046*	20.006'	W			-23.92		-1,469.58		-46.33			7.9	15 mins	4 Pilotage waters	9	0.40	2	10	A1	1.33	Verify Depth	REF INSTR.16 / PFI METHOD	2	0.07	0.6	1.00				A1
1		23*	55.630'	S	046*	19.663'	W	125.1	0.4	-23.93	0.00	-1,469.82	-0.24	-46.33	0.01	125.15	7.5	15 mins	4 Pilotage waters	9	0.40	10	14	A1	4.61		REF INSTR.16 / PFI METHOD	1	0.79	0.64	1.00				A2
2		23*	55.790'	S	046*	18.979'	W	104.3	0.6	-23.93	0.00	-1,470.00	-0.17	-46.32	0.01	104.28	6.9	15 mins	4 Pilotage waters	9	0.40	12	14	A1	4.26		REF INSTR.16 / PFI METHOD	1	1.14	0.64	1.00				B
3		23*	56.100'	S	046*	18.678'	W	138.2	0.4	-23.94	-0.01	-1,470.34	-0.34	-46.31	0.01	138.25	6.5	15 mins	4 Pilotage waters	9	0.40	12	14.6	A1	4.86		REF INSTR.16 / PFI METHOD	1	1.14	0.646	1.00				C
4		23*	56.571'	S	046*	18.638'	W	175.5	0.5	-23.94	-0.01	-1,470.85	-0.51	-46.31	0.00	175.54	6.0	15 mins	4 Pilotage waters	9	0.40	12	15	A1	5.26		REF INSTR.16 / PFI METHOD	1	1.14	0.65	1.00				D
5		23*	56.943'	S	046*	18.570'	W	170.5	0.4	-23.95	-0.01	-1,471.25	-0.40	-46.31	0.00	170.46	5.6	15 mins	4 Pilotage waters	9	0.40	12	15.5	A1	5.76		REF INSTR.16 / PFI METHOD	1	1.14	0.655	1.00				U
6		23*	57.259'	S	046*	18.421'	W	156.6	0.3	-23.95	-0.01	-1,471.60	-0.34	-46.31	0.00	156.57	5.3	15 mins	4 Pilotage waters	9	0.40	12	15.1	A1	5.36		REF INSTR.16 / PFI METHOD	1	1.14	0.651	1.00				
7		23*	58.180'	S	046*	17.535'	W	138.5	1.2	-23.97	-0.02	-1,472.60	-1.00	-46.29	0.01	138.52	4.1	15 mins	4 Pilotage waters	9	0.40	12	14.3	A1	4.56		REF INSTR.16 / PFI METHOD	1	1.14	0.643	1.00				
8		23*	58.576'	S	046*	17.330'	W	154.6	0.4	-23.98	-0.01	-1,473.03	-0.43	-46.29	0.00	154.56	3.6	15 mins	4 Pilotage waters	9	0.40	12	15.5	A1	5.76		REF INSTR.16 / PFI METHOD	1	1.14	0.655	1.00				
9		23*	58.918'	S	046*	17.280'	W	172.3	0.3	-23.98	-0.01	-1,473.40	-0.37	-46.29	0.00	172.35	3.3	15 mins	4 Pilotage waters	9	0.40	12	15.6	A1	5.86		REF INSTR.16 / PFI METHOD	1	1.14	0.656	1.00				
10		23*	59.200'	S	046*	17.428'	W	205.7	0.3	-23.99	0.00	-1,473.71	-0.31	-46.29	0.00	205.75	3.0	15 mins	4 Pilotage waters	9	0.40	12	15.3	A1	5.56		REF INSTR.16 / PFI METHOD	1	1.14	0.653	1.00				
11		23*	59.520'	S	046*	17.710'	W	219.0	0.4	-23.99	-0.01	-1,474.06	-0.35	-46.30	0.00	219.00	2.6	15 mins	4 Pilotage waters	9	0.40	12	16.6	A1	6.86		REF INSTR.16 / PFI METHOD	1	1.14	0.666	1.00				
12		23*	59.600'	S	046*	18.000'	W	253.3	0.3	-23.99	0.00	-1,474.14	-0.09	-46.30	0.00	253.29	2.3	15 mins	4 Pilotage waters	9	0.40	12	15.7	A1	5.96		REF INSTR.16 / PFI METHOD	1	1.14	0.657	1.00				
13		23*	59.530'	S	046*	19.131'	W	273.9	1.0	-23.99	0.00	-1,474.07	0.08	-46.32	-0.02	273.85	1.2	15 mins	4 Pilotage waters	9	0.40	12	13.5	A1	3.76		REF INSTR.16 / PFI METHOD	1	1.14	0.635	1.00				
14		23*	59.500'	S	046*	19.336'	W	279.0	0.2	-23.99	0.00	-1,474.04	0.03	-46.32	0.00	279.05	1.0	15 mins	4 Pilotage waters	9	0.40	12	13.5	A1	3.76		REF INSTR.16 / PFI METHOD	1	1.14	0.635	1.00				
15		23*	59.600'	S	046*	19.580'	W	246.0	0.2	-23.99	0.00	-1,474.14	-0.11	-46.33	0.00	245.96	0.8	15 mins	4 Pilotage waters	9	0.40	12	13.5	A1	3.76		REF INSTR.16 / PFI METHOD	1	1.14	0.635	1.00				
16		23*	59.700'	S	046*	19.800'	W	243.7	0.2	-24.00	0.00	-1,474.25	-0.11	-46.33	0.00	243.68	0.6	15 mins	4 Pilotage waters	9	0.40	12	13.5	A1	3.76		REF INSTR.16 / PFI METHOD	1	1.14	0.635	1.00				
17		24*	00.000'	S	046*	20.079'	W	220.5	0.4	-24.00	0.00	-1,474.58	-0.33	-46.33	0.00	220.51	0.2	15 mins	4 Pilotage waters	9	0.40	12	13.5	A1	3.76		REF INSTR.16 / PFI METHOD	1	1.14	0.635	1.00				
18	SANTOS PBG	24*	00.000'	S	046*	20.270'	W	270.0	0.2	-24.00	0.00	-1,474.58	0.00	-46.34	0.00	270.00	0.0	15 mins	4 Pilotage waters	9	0.40	12	13.5	A1	3.76		REF INSTR.16 / PFI METHOD	1	1.14	0.635	1.00				
										0.00	24.00	0.00	1,474.58	0.00	46.34	422.06														0	1.00				
										0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
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Select from list
5 mins or less
10 mins or less
15 mins
30 mins
60 mins
2 hours
Other value

Select from list
1 Sea, good vis.
2 Sea, restr. Vis.
3 Arr/Dep, restr. waters
4 Pilotage waters
5 Master's discretion

Select from list
Visual
Radar
GPS
Celestial
Visual/Radar
Visual/GPS
Radar/GPS

Fleet Management Limited

Section 12: Sea Passage from Pilot Station to Pilot Station

M.V/I T CELSIUS MALAG/

Short-cut formulae used for squat. For more accurate squat estimation, use UKC calculation sheets.

Voyage No. 26

Where practicable, a longer route should be planned in preference to a shorter but more hazardous route.

WP	Name/ Reference	Latitude Deg Min	'N/S	Longitude Deg Min	'E/W	T/CO	DIST	LAT	DLAT	MP	DMP	LONG	DLO	RL/CO	DTG	Position Checking Interval Instr. 15	Bridge manning Level Instr. 27	UKC CALCULATION AT EVERY WAY POINT (mtr): Static Draft+Roll/ Pitch/Heave. NO SQUAT.	Height of Tide (where applicable)	Intended transit Speed	Min. Charted Depth	CATZOC Instr. 18	UKC Instr. 19	CATZOC DEPTH CAUTION see Instr. 20	REMARKS (Min. distance from nearest land or hazard, cross-track distances, P.I. distances etc.)	Confined 2, Open 1	Squat	CATZOC Value	REQD UKC	UKC Warning	UKC Warning text	warning	CATZOC
19	SANTOS PBG	24* 00.500'	S	046* 20.273'	W			-24.01		-1,475.12		-46.34			5,665.7	15 mins	3 Arr/Dep, restr. waters	9	0.00	12	13.4	B	3.26		REF INSTR.16 / PFI METHOD	1	1.14	1.268	1.00				A1
20		24* 08.810'	S	046* 23.719'	W	200.8	8.9	-24.15	-0.14	-1,484.17	-9.05	-46.40	-0.06	200.84	5,656.8	2 hours	3 Arr/Dep, restr. waters	9	0.00	14	14.2	B	3.65		REF INSTR.16 / PFI METHOD	1	1.55	1.284	1.00				A2
21		24* 20.100'	S	046* 21.544'	W	170.0	11.5	-24.34	-0.19	-1,496.49	-12.31	-46.36	0.04	169.98	5,645.4	2 hours	1 Sea, good vis.	9	0.00	14	31	B	20.45		REF INSTR.16 / PFI METHOD	1	1.55	1.62	1.00				B
22		24* 31.700'	S	046* 10.423'	W	138.7	15.4	-24.53	-0.19	-1,509.16	-12.67	-46.17	0.19	138.72	5,629.9	2 hours	1 Sea, good vis.	9	0.00	14	30	B	19.45		REF INSTR.16 / PFI METHOD	1	1.55	1.6	1.00				C
23		23* 55.989'	S	041* 22.910'	W	082.3	266.1	-23.93	0.60	-1,470.21	38.94	-41.38	4.79	442.29	5,363.9	2 hours	1 Sea, good vis.	9	0.00	14	50	B	39.45		REF INSTR.16 / PFI METHOD	1	1.55	2	1.00				D
24		23* 10.400'	S	040* 01.415'	W	058.8	87.9	-23.17	0.76	-1,420.77	49.45	-40.02	1.36	418.75	5,276.0	2 hours	1 Sea, good vis.	9	0.00	14	2000	B	1989.45		REF INSTR.16 / PFI METHOD	1	1.55	41	1.00				U
25		22* 03.110'	S	038* 57.302'	W	041.5	89.8	-22.05	1.12	-1,348.29	72.47	-38.96	1.07	401.50	5,186.1	2 hours	1 Sea, good vis.	9	0.00	14	2000	C	1989.45		REF INSTR.16 / PFI METHOD	1	1.55	102	1.00				
26		18* 09.916'	S	037* 17.220'	W	022.1	251.6	-18.17	3.89	-1,101.38	246.91	-37.29	1.67	382.06	4,934.5	15 mins	3 Arr/Dep, restr. waters	9	0.00	14	60	C	49.45		REF INSTR.16 / PFI METHOD	1	1.55	5	1.00				
27		07* 50.400'	S	034* 19.335'	W	015.7	643.5	-7.84	10.33	-468.70	632.69	-34.32	2.96	375.70	4,291.0	15 mins	3 Arr/Dep, restr. waters	9	0.00	14	500	C	489.45		REF INSTR.16 / PFI METHOD	1	1.55	27	1.00				
28		06* 57.467'	S	034* 20.723'	W	358.5	53.0	-6.96	0.88	-415.67	53.02	-34.35	-0.02	358.50	4,238.0	15 mins	3 Arr/Dep, restr. waters	9	0.00	14	2000	C	1989.45		REF INSTR.16 / PFI METHOD	1	1.55	102	1.00				
29		05* 03.640'	S	034* 57.177'	W	342.2	119.5	-5.06	1.90	-301.98	113.69	-34.95	-0.61	342.22	4,118.5	15 mins	1 Sea, good vis.	9	0.00	14	200	B	189.45		REF INSTR.16 / PFI METHOD	1	1.55	5	1.00				
30		03* 34.800'	N	048* 05.784'	W	303.2	947.6	3.58	8.64	213.48	515.46	-48.10	-13.14	303.17	3,170.9	15 mins	1 Sea, good vis.	9	0.00	14	200	B	189.45		REF INSTR.16 / PFI METHOD	1	1.55	5	1.00				
31		05* 47.999'	N	051* 32.153'	W	302.8	246.2	5.80	2.22	346.24	132.76	-51.54	-3.44	302.75	2,924.7	15 mins	1 Sea, good vis.	9	0.00	14	38	B	27.45		REF INSTR.16 / PFI METHOD	1	1.55	1.76	1.00				
32		07* 54.740'	N	054* 48.872'	W	302.8	233.9	7.91	2.11	473.05	126.81	-54.81	-3.28	302.81	2,690.8	15 mins	1 Sea, good vis.	9	0.00	14	60	U	49.45		REF INSTR.16 / PFI METHOD	1	1.55	0	1.00				
33		11* 28.200'	N	060* 23.649'	W	302.7	394.8	11.47	3.56	688.21	215.16	-60.39	-5.58	302.73	2,296.0	15 mins	1 Sea, good vis.	9	0.00	14	2000	U	1989.45		REF INSTR.16 / PFI METHOD	1	1.55	0	1.00				
34		11* 38.300'	N	062* 00.820'	W	276.0	96.4	11.64	0.17	698.45	10.24	-62.01	-1.62	276.02	2,199.6	15 mins	1 Sea, good vis.	9	0.00	14	190	U	179.45		REF INSTR.16 / PFI METHOD	1	1.55	0	1.00				
35		19* 59.623'	N	079* 39.688'	W	296.1	1,140.3	19.99	8.36	1,216.77	518.32	-79.66	-17.65	296.08	1,059.4	15 mins	1 Sea, good vis.	9	0.00	14	600	U	589.45		REF INSTR.16 / PFI METHOD	1	1.55	0	1.00				
36		21* 36.200'	N	085* 16.445'	W	287.0	331.1	21.60	1.61	1,319.47	102.70	-85.27	-5.61	286.96	728.3	15 mins	1 Sea, good vis.	9	0.00	14	1000	U	989.45		REF INSTR.16 / PFI METHOD	1	1.55	0	1.00				
37		23* 44.729'	N	088* 59.641'	W	301.8	243.8	23.75	2.14	1,457.97	138.50	-88.99	-3.72	301.82	484.5	15 mins	1 Sea, good vis.	9	0.00	14	32	U	21.45		REF INSTR.16 / PFI METHOD	1	1.55	0	1.00				
38		26* 11.521'	N	093* 01.247'	W	303.7	264.7	26.19	2.45	1,619.02	161.04	-93.02	-4.03	303.69	219.9	15 mins	1 Sea, good vis.	9	0.00	14	200	U	189.45		REF INSTR.16 / PFI METHOD	1	1.55	0	1.00				
39		27* 39.970'	N	094* 24.655'	W	319.8	115.8	27.67	1.47	1,717.69	98.68	-94.41	-1.39	319.79	104.1	15 mins	1 Sea, good vis.	9	0.00	14	40	U	29.45		REF INSTR.16 / PFI METHOD	1	1.55	0	1.00				
40		28* 07.535'	N	094* 25.098'	W	359.2	27.6	28.13	0.46	1,748.72	31.02	-94.42	-0.01	359.18	76.5	15 mins	1 Sea, good vis.	9	0.00	14	40	U	29.45		REF INSTR.16 / PFI METHOD	1	1.55	0	1.00				
41		28* 40.600'	N	094* 25.035'	W	000.1	33.1	28.68	0.55	1,786.11	37.39	-94.42	0.00	360.10	43.4	15 mins	1 Sea, good vis.	9	0.00	14	14.9	U	4.35	Verify Depth	REF INSTR.16 / PFI METHOD	1	1.55	0	1.00				
42		28* 55.640'	N	094* 25.094'	W	359.8	15.0	28.93	0.25	1,803.18	17.07	-94.42	0.00	359.80	28.4	15 mins	1 Sea, good vis.	9	0.00	14	15	U	4.45	Verify Depth	REF INSTR.16 / PFI METHOD	1	1.55	0	1.00				
43		29* 06.330'	N	094* 24.910'	W	000.9	10.7	29.11	0.18	1,815.34	12.16	-94.42	0.00	360.87	17.7	15 mins	3 Arr/Dep, restr. waters	9	0.00	14	15	U	4.45	Verify Depth	REF INSTR.16 / PFI METHOD	1	1.55	0	1.00				
44		29* 09.890'	N	094* 24.225'	W	009.6	3.6	29.16	0.06	1,819.40	4.05	-94.40	0.01	369.59	14.1	15 mins	3 Arr/Dep, restr. waters	9	0.00	14	14.3	U	3.75	Verify Depth	REF INSTR.16 / PFI METHOD	1	1.55	0	1.00				
45		29* 14.256'	N	094* 31.153'	W	305.7	7.5	29.24	0.07	1,824.37	4.98	-94.52	-0.12	305.69	6.6	15 mins	3 Arr/Dep, restr. waters	9	0.00	14	12.7	U	2.15	Verify Depth	REF INSTR.16 / PFI METHOD	1	1.55	0	1.00				
46		29* 18.020'	N	094* 35.918'	W	312.0	5.6	29.30	0.06	1,828.67	4.29	-94.60	-0.08	312.01	1.0	15 mins	3 Arr/Dep, restr. waters	9	0.00	14	12.7	U	2.15	Verify Depth	REF INSTR.16 / PFI METHOD	1	1.55	0	1.00				
47	HOUSTON PBG	29* 18.136'	N	094* 37.026'	W	276.8	1.0	29.30	0.00	1,828.80	0.13	-94.62	-0.02	276.81	0.0	15 mins	2 Sea, restr. Vis.	9	0.00	12	14.6	U	4.46	Verify Depth	REF INSTR.16 / PFI METHOD	1	1.14	0	1.00				
								0.00	-29.30	0.00	-1,828.80	0.00	94.62	107.86														0	1.00				
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					5,665.7	0.00	0.00	0.00	0.00	0.00	0.00	0.00												0	1.00

Select from list
5 mins or less
10 mins or less
15 mins
30 mins
60 mins
2 hours
Other value

Select from list
1 Sea, good vis.
2 Sea, restr. Vis.
3 Arr/Dep, restr. waters
4 Pilotage waters
5 Master's discretion

Select from list
Visual
Radar
GPS
Celestial
Visual/Radar
Visual/GPS
Radar/GPS

Section 13A: Arrival Port - Passage from Pilot Station to Berth

M.V/ T CELSIUS MALAG/

(If there are a large number of way-points, an ECDIS printout of way-points may be attached to this section instead of typing in all way-points on this sheet. In this case, only waypoints representing minimum depths / CATZOC values / tidal heights need be inserted in this sheet, in order to calculate UKC). Short-cut formulae used for squat. For more accurate squat estimation, use UKC calculation sheets.

Voyage No. 26

WP	Name/ Reference	Latitude Deg	Latitude Min	'N/S	Longitude Deg	Longitude Min	'E/W	T/CO	DIST	LAT	DLAT	MP	DMP	LONG	DLO	RL/CO	DTG	Position Checking Interval Instr. 15	Bridge manning Level Instr. 27	UKC CALCULATION AT EVERY WAY POINT (mtr): Static Draft+Roll/ Pitch/Heave. NO SQUAT.	Height of Tide	Intended transit Speed	Min. Charted Depth	CATZOC Instr. 18	UKC Instr. 19	CATZOC DEPTH CAUTION see Instr. 20	REMARKS (ex. Cross-track distances, P.I. distances, etc.)	Confined 2, Open 1	Squat	CATZOC Value	REQD UKC	UKC Warning	UKC Warning text	warning	CATZOC
1	PILOT STN	29*	18.144'	N	094*	37.027'	W			29.30		1,828.81		-94.62			41.9	15 mins	4 Pilotage waters	9	0.00	6	13.1	U	3.81	Verify Depth	REF INSTR.16 / PFI METHOD	1	0.29	0	1.00				A1
2		29*	18.372'	N	094*	37.413'	W	304.0	0.4	29.31	0.00	1,829.07	0.26	-94.62	-0.01	303.97	41.5	15 mins	4 Pilotage waters	9	0.00	12	14	U	3.86	Verify Depth	REF INSTR.16 / PFI METHOD	1	1.14	0	1.00				A2
3		29*	20.415'	N	094*	41.294'	W	301.0	4.0	29.34	0.03	1,831.40	2.33	-94.69	-0.06	300.99	37.5	15 mins	4 Pilotage waters	9	0.00	12	14	U	3.86	Verify Depth	REF INSTR.16 / PFI METHOD	1	1.14	0	1.00				B
4		29*	20.739'	N	094*	42.907'	W	282.9	1.4	29.35	0.01	1,831.77	0.37	-94.72	-0.03	282.91	36.1	15 mins	4 Pilotage waters	9	0.00	12	14	U	3.86	Verify Depth	REF INSTR.16 / PFI METHOD	1	1.14	0	1.00				C
5		29*	20.549'	N	094*	46.160'	W	266.2	2.9	29.34	0.00	1,831.55	-0.22	-94.77	-0.05	266.19	33.2	15 mins	4 Pilotage waters	9	0.00	12	14	U	3.86	Verify Depth	REF INSTR.16 / PFI METHOD	1	1.14	0	1.00				D
6		29*	20.873'	N	094*	46.902'	W	296.5	0.7	29.35	0.01	1,831.92	0.37	-94.78	-0.01	296.49	32.5	15 mins	4 Pilotage waters	9	0.00	12	14	U	3.86	Verify Depth	REF INSTR.16 / PFI METHOD	1	1.14	0	1.00				U
7		29*	22.076'	N	094*	48.133'	W	318.1	1.6	29.37	0.02	1,833.29	1.37	-94.80	-0.02	318.12	30.9	15 mins	4 Pilotage waters	9	0.00	12	14	U	3.86	Verify Depth	REF INSTR.16 / PFI METHOD	1	1.14	0	1.00				
8		29*	29.594'	N	094*	51.908'	W	336.3	8.2	29.49	0.13	1,841.88	8.59	-94.87	-0.06	336.27	22.7	15 mins	4 Pilotage waters	9	0.00	12	14	U	3.86	Verify Depth	REF INSTR.16 / PFI METHOD	1	1.14	0	1.00				
9		29*	36.475'	N	094*	57.196'	W	326.1	8.3	29.61	0.11	1,849.75	7.87	-94.95	-0.09	326.10	14.4	15 mins	4 Pilotage waters	9	0.00	12	14	U	3.86	Verify Depth	REF INSTR.16 / PFI METHOD	1	1.14	0	1.00				
10		29*	40.253'	N	094*	58.626'	W	341.7	4.0	29.67	0.06	1,854.08	4.32	-94.98	-0.02	341.70	10.4	15 mins	4 Pilotage waters	9	0.00	12	14	U	3.86	Verify Depth	REF INSTR.16 / PFI METHOD	1	1.14	0	1.00				
11		29*	41.096'	N	094*	58.946'	W	341.7	0.9	29.68	0.01	1,855.04	0.97	-94.98	-0.01	341.66	9.5	15 mins	4 Pilotage waters	9	0.00	12	14	U	3.86	Verify Depth	REF INSTR.16 / PFI METHOD	1	1.14	0	1.00				
12		29*	41.341'	N	094*	59.126'	W	327.3	0.3	29.69	0.00	1,855.32	0.28	-94.99	0.00	327.32	9.2	15 mins	4 Pilotage waters	9	0.00	12	14	U	3.86	Verify Depth	REF INSTR.16 / PFI METHOD	1	1.14	0	1.00				
13		29*	41.854'	N	094*	59.754'	W	313.1	0.8	29.70	0.01	1,855.91	0.59	-95.00	-0.01	313.09	8.5	15 mins	4 Pilotage waters	9	0.00	12	14	U	3.86	Verify Depth	REF INSTR.16 / PFI METHOD	1	1.14	0	1.00				
14		29*	41.975'	N	095*	00.038'	W	296.0	0.3	29.70	0.00	1,856.05	0.14	-95.00	0.00	296.01	8.2	15 mins	4 Pilotage waters	9	0.00	12	14	U	3.86	Verify Depth	REF INSTR.16 / PFI METHOD	1	1.14	0	1.00				
15		29*	42.052'	N	095*	00.333'	W	286.6	0.3	29.70	0.00	1,856.14	0.09	-95.01	0.00	286.64	7.9	15 mins	4 Pilotage waters	9	0.00	12	14	U	3.86	Verify Depth	REF INSTR.16 / PFI METHOD	1	1.14	0	1.00				
16		29*	42.088'	N	095*	00.678'	W	276.8	0.3	29.70	0.00	1,856.18	0.04	-95.01	-0.01	276.82	7.6	15 mins	4 Pilotage waters	9	0.00	12	14	U	3.86	Verify Depth	REF INSTR.16 / PFI METHOD	1	1.14	0	1.00				
17		29*	42.199'	N	095*	00.973'	W	293.3	0.3	29.70	0.00	1,856.30	0.13	-95.02	0.00	293.31	7.3	15 mins	4 Pilotage waters	9	0.00	12	14	U	3.86	Verify Depth	REF INSTR.16 / PFI METHOD	1	1.14	0	1.00				
18		29*	42.376'	N	095*	01.147'	W	319.4	0.2	29.71	0.00	1,856.51	0.20	-95.02	0.00	319.36	7.1	15 mins	4 Pilotage waters	9	0.00	12	14	U	3.86	Verify Depth	REF INSTR.16 / PFI METHOD	1	1.14	0	1.00				
19		29*	42.609'	N	095*	01.234'	W	341.9	0.2	29.71	0.00	1,856.77	0.27	-95.02	0.00	341.95	6.8	15 mins	4 Pilotage waters	9	0.00	12	14	U	3.86	Verify Depth	REF INSTR.16 / PFI METHOD	1	1.14	0	1.00				
20		29*	43.330'	N	095*	01.226'	W	000.6	0.7	29.72	0.01	1,857.60	0.83	-95.02	0.00	360.55	6.1	15 mins	4 Pilotage waters	9	0.00	12	14	U	3.86	Verify Depth	REF INSTR.16 / PFI METHOD	1	1.14	0	1.00				
21		29*	43.582'	N	095*	01.425'	W	325.4	0.3	29.73	0.00	1,857.89	0.29	-95.02	0.00	325.42	5.8	15 mins	4 Pilotage waters	9	0.00	12	14	U	3.86	Verify Depth	REF INSTR.16 / PFI METHOD	1	1.14	0	1.00				
22		29*	43.779'	N	095*	01.649'	W	315.2	0.3	29.73	0.00	1,858.11	0.23	-95.03	0.00	315.22	5.5	15 mins	4 Pilotage waters	9	0.00	12	14	U	3.86	Verify Depth	REF INSTR.16 / PFI METHOD	1	1.14	0	1.00				
23		29*	43.884'	N	095*	02.680'	W	276.7	0.9	29.73	0.00	1,858.24	0.12	-95.04	-0.02	276.66	4.6	15 mins	4 Pilotage waters	9	0.00	12	14	U	3.86	Verify Depth	REF INSTR.16 / PFI METHOD	1	1.14	0	1.00				
24		29*	43.961'	N	095*	02.889'	W	292.9	0.2	29.73	0.00	1,858.32	0.09	-95.05	0.00	292.88	4.4	15 mins	4 Pilotage waters	9	0.00	12	14	U	3.86	Verify Depth	REF INSTR.16 / PFI METHOD	1	1.14	0	1.00				
25		29*	44.191'	N	095*	03.339'	W	300.4	0.5	29.74	0.00	1,858.59	0.26	-95.06	-0.01	300.35	4.0	15 mins	4 Pilotage waters	9	0.00	12	14	U	3.86	Verify Depth	REF INSTR.16 / PFI METHOD	1	1.14	0	1.00				
26		29*	44.356'	N	095*	03.538'	W	313.5	0.2	29.74	0.00	1,858.78	0.19	-95.06	0.00	313.53	3.7	15 mins	4 Pilotage waters	9	0.00	12	14	U	3.86	Verify Depth	REF INSTR.16 / PFI METHOD	1	1.14	0	1.00				
27		29*	45.360'	N	095*	04.042'	W	336.3	1.1	29.76	0.02	1,859.93	1.15	-95.07	-0.01	336.34	2.6	15 mins	4 Pilotage waters	9	0.00	12	14	U	3.86	Verify Depth	REF INSTR.16 / PFI METHOD	1	1.14	0	1.00				
28		29*	45.537'	N	095*	04.217'	W	319.2	0.2	29.76	0.00	1,860.13	0.20	-95.07	0.00	319.21	2.4	15 mins	4 Pilotage waters	9	0.00	12	14	U	3.86	Verify Depth	REF INSTR.16 / PFI METHOD	1	1.14	0	1.00				
29		29*	45.740'	N	095*	04.577'	W	302.9	0.4	29.76	0.00	1,860.36	0.23	-95.08	-0.01	302.87	2.0	15 mins	4 Pilotage waters	9	0.00	12	14	U	3.86	Verify Depth	REF INSTR.16 / PFI METHOD	1	1.14	0	1.00				
30		29*	45.834'	N	095*	04.873'	W	290.0	0.3	29.76	0.00	1,860.47	0.11	-95.08	0.00	290.00	1.8	15 mins	4 Pilotage waters	9	0.00	12	14	U	3.86	Verify Depth	REF INSTR.16 / PFI METHOD	1	1.14	0	1.00				
31		29*	45.797'	N	095*	05.204'	W	262.7	0.3	29.76	0.00	1,860.43	-0.04	-95.09	-0.01	262.70	1.5	15 mins	4 Pilotage waters	9	0.00	12	14	U	3.86	Verify Depth	REF INSTR.16 / PFI METHOD	1	1.14	0	1.00				
32		29*	45.641'	N	095*	05.403'	W	228.1	0.2	29.76	0.00	1,860.25	-0.18	-95.09	0.00	228.06	1.2	15 mins	4 Pilotage waters	9	0.00	12	12.1	U	1.96	Verify Depth	REF INSTR.16 / PFI METHOD	1	1.14	0	1.00				
33		29*	45.432'	N	095*	05.523'	W	206.6	0.2	29.76	0.00	1,860.01	-0.24	-95.09	0.00	206.61	1.0	15 mins	4 Pilotage waters	9	0.00	12	12.1	U	1.96	Verify Depth	REF INSTR.16 / PFI METHOD	1	1.14	0	1.00				
34		29*	45.019'	N	095*	05.700'	W	200.5	0.4	29.75	-0.01	1,859.54	-0.47	-95.10	0.00	200.50	0.6	15 mins	4 Pilotage waters	9	0.00	12	11.2	U	1.06	Verify Depth	REF INSTR.16 / PFI METHOD	1	1.14	0	1.00				
35		29*	44.912'	N	095*	05.954'	W	244.2	0.2	29.75	0.00	1,859.41	-0.12	-95.10	0.00	244.23	0.3	15 mins	4 Pilotage waters	9	0.00	12	11.2	U	1.06	Verify Depth	REF INSTR.16 / PFI METHOD	1	1.14	0	1.00				
36		29*	44.793'	N	095*	06.020'	W	205.8	0.1	29.75	0.00	1,859.28	-0.14	-95.10	0.00	205.83	0.2	15 mins	4 Pilotage waters	9	0.00	8	11.2	U	1.69	Verify Depth	REF INSTR.16 / PFI METHOD	1	0.51	0	1.00				
37	ITC -BERTH	29*	44.660'	N	095*	05.874'	W	136.2	0.2	29.74	0.00	1,859.12	-0.15	-95.10	0.00	136.23	0.0	15 mins	4 Pilotage waters	9	0.00	8	11.2	U	1.69	Verify Depth	REF INSTR.16 / PFI METHOD	1	0.51	0	1.00				
										0.00	-29.74	0.00	-1,859.12	0.00	95.10	108.05														0	1.00				
										0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
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						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
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						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
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						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
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						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
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						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
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						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
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						0.00	0.00	0.00	0.00	0.00	0.00													0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00													0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00													0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00													0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00													0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00													0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00													0	1.00
					41.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00												0	1.00

Select from list
5 mins or less
10 mins or less
15 mins
30 mins
60 mins
2 hours
Other value

Select from list
1 Sea, good vis.
2 Sea, restr. Vis.
3 Arr/Dep, restr. waters
4 Pilotage waters
5 Master's discretion

Select from list
Visual
Radar
GPS
Celestial
Visual/Radar
Visual/GPS
Radar/GPS

Fleet Management Limited

Section 13B: Arrival Port - Passage from Pilot Station to Anchorage

Short-cut formulae used for squat. For more accurate squat estimation, use UKC calculation sheets.

M.V/ M T CELSIUS MALAGA

Voyage No. 26

WP	Name/ Reference	Latitude Deg Min 'N/S	Longitude Deg Min 'E/W	T/CO	DIST	LAT	DLAT	MP	DMP	LONG	DLO	RL/CO	DTG	Position Checking Interval Instr. 15	Bridge manning Level Instr. 27	UKC CALCULATION AT EVERY WAY POINT (mtr): Static Draft+Roll/ Pitch/Heave. NO SQUAT.	Height of Tide	Intended transit Speed	Min. Charted Depth	CATZOC Instr. 18	UKC Instr. 19	CATZOC DEPTH CAUTION see Instr. 20	REMARKS (ex. Cross-track distances, P.I. distances, etc.)	Confined 2, Open 1	Squat	CATZOC Value	REQD UKC	UKC Warning	UKC Warning text	warning	CATZOC
						0.00		0.00		0.00																0	1.00				A1
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				A2
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				B
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				C
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				D
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				U
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
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						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				

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						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
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						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
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						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
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						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
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						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
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						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
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						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
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						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
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						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
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						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
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						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
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						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
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						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
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						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
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						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
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					0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00												0	1.00

Select from list
5 mins or less
10 mins or less
15 mins
30 mins
60 mins
2 hours
Other value

Select from list
1 Sea, good vis.
2 Sea, restr. Vis.
3 Arr/Dep, restr. waters
4 Pilotage waters
5 Master's discretion

Select from list
Visual
Radar
GPS
Celestial
Visual/Radar
Visual/GPS
Radar/GPS

Section 13C: Arrival Port - Passage from EOSP to Anchorage / Drifting in safe waters

Short-cut formulae used for squat. For more accurate squat estimation, use UKC calculation sheets.

M.V/ T CELSIUS MALAGA

Voyage No. 26

WP	Name/ Reference	Latitude Deg Min 'N/S	Longitude Deg Min 'E/W	T/CO	DIST	LAT	DLAT	MP	DMP	LONG	DLO	RL/CO	DTG	Position Checking Interval Instr. 15	Bridge manning Level Instr. 27	UKC CALCULATION AT EVERY WAY POINT (mtr): Static Draft+Roll/ Pitch/Heave. NO SQUAT.	Height of Tide	Intended transit Speed	Min. Charted Depth	CATZOC Instr. 18	UKC Instr. 19	CATZOC DEPTH CAUTION see Instr. 20	REMARKS (ex. Cross-track distances, P.I. distances, etc.)	Confined 2, Open 1	Squat	CATZOC Value	REQD UKC	UKC Warning	UKC Warning text	warning	CATZOC
						0.00		0.00		0.00													REF INSTR.16 / PFI METHOD			0	1.00				A1
						0.00	0.00	0.00	0.00	0.00	0.00												REF INSTR.16 / PFI METHOD			0	1.00				A2
						0.00	0.00	0.00	0.00	0.00	0.00												REF INSTR.16 / PFI METHOD			0	1.00				B
						0.00	0.00	0.00	0.00	0.00	0.00												REF INSTR.16 / PFI METHOD			0	1.00				C
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				D
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				U
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
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						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
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						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
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						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
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						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
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						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
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						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
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						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
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						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
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						0.00	0.00	0.00	0.00	0.00	0.00													0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00													0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00													0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00													0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00													0	1.00
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						0.00	0.00	0.00	0.00	0.00	0.00													0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00													0	1.00
					0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00												0	1.00

Select from list
5 mins or less
10 mins or less
15 mins
30 mins
60 mins
2 hours
Other value

Select from list
1 Sea, good vis.
2 Sea, restr. Vis.
3 Arr/Dep, restr. waters
4 Pilotage waters
5 Master's discretion

Select from list
Visual
Radar
GPS
Celestial
Visual/Radar
Visual/GPS
Radar/GPS

Fleet Management Limited

M.V/ T CELSIUS MALAGA

Short-cut formulae used for squat. For more accurate squat estimation, use UKC calculation sheets.

Voyage No. 26

UKC CALCULATION AT EVERY WAY POINT (mtr)

WP	Name/ Reference	Latitude Deg Min 'N/S	Longitude Deg Min 'E/W	T/CO	DIST	LAT	DLAT	MP	DMP	LONG	DLO	RL/CO	DTG	Position Checking Interval Instr. 15	Bridge manning Level Instr. 27	Static Draft+Roll/ Pitch/Heave. NO SQUAT.	Height of Tide (where applicable)	Intended transit Speed	Min. Charted Depth	CATZOC Instr. 18	UKC Instr. 19	CATZOC DEPTH CAUTION see Instr. 20	REMARKS (ex. Cross-track distances, P.I. distances, etc.)	Confined 2, Open 1	Squat	CATZOC Value	REQD UKC	UKC Warning	UKC Warning text	warning	CATZOC
						0.00		0.00		0.00																0	1.00				A1
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				A2
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				B
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				C
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				D
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				U
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				
						0.00	0.00	0.00	0.00	0.00	0.00															0	1.00				

						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
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						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00

						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
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						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
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						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
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						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00												0	1.00

						0.00	0.00	0.00	0.00	0.00	0.00													0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00													0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00													0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00													0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00													0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00													0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00													0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00													0	1.00
						0.00	0.00	0.00	0.00	0.00	0.00													0	1.00
					0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00												0	1.00

Select from list
5 mins or less
10 mins or less
15 mins
30 mins
60 mins
2 hours
Other value

Select from list
1 Sea, good vis.
2 Sea, restr. Vis.
3 Arr/Dep, restr. waters
4 Pilotage waters
5 Master's discretion

Select from list
Visual
Radar
GPS
Celestial
Visual/Radar
Visual/GPS
Radar/GPS

Section 14 A. Instructions for filling UKC Calculation Form

M.V/M.T M T CELSIUS MALAGA Voyage No: 26

1 In the 'General Information' sheet, pease ensure that the shaded cells are filled-in.
2 In the 'UKC Calculation' sheets only the shaded cells are to be filled in.
3 In 'Position (lat/long)', the co-ordinates of the position for which the UKC calculation is done, or of the starting position of a shallow area are to be entered.
4 In 'Distance of shallow area' enter the distance over which the min. UKC is expected.
5 In 'Heel' enter the maximum (combined) angle of heel expected due to List, effect of weather (i.e. roll) and course alteration. Increase in draft will be auto-calculated.
6 In 'Increase in draft due to pitch', the amount in metres may be obtained from the draft gauge if possible or by obtaining from an inclinometer in the F/A plane (or estimating) the pitch angle in degrees, then using the formula Draft incr = LOA/2 X Sin pitch angle.
7 Allowance for sea and swell are to be entered in 'Incr in draft due to heave (sea/swell)' in metres.
8 Fill in the correct block coefficent for the corrected mean draft.
9 The intended transit speed MUST only be speed through the water as this what controls Squat, not speed over the ground.
10 When entering controlling depth data , put (-) sign in case the height of tide is negative.
11 Enter the distance between the shorelines / shore construction on each side of the vessel, in nautical miles. This information will allow a more accurate estimation of squat to be automatically calculated. The width of the dredged limits of a channel should NOT be entered here.
12 Check and fill in the value of CATZOC as obtained from the CATZOC layer triangles, pick report on ECDIS, or survey diagram on paper charts as follows:
A1 (6 stars), A2 (5 stars), B (4 stars), C (3 stars), D (2 stars) or U (U).
13 Where a certain height of tide is required to ensure safe transit, a tidal window must be calculated as given in section 4 (TIDES AND CURRENTS) of this passage plan.
A UKC calculation sheet must be completed for each position for which the Tidal Window is being calculated.
14 Risk assessments MUST be completed whenever the UKC is insufficient (less than Co. policy) or whenever the application of CATZOC would lead to an insufficient UKC.
15 Squat calculation used: $C_b*S^{0.81}*V_k^{2.08}/20$. C_b:Block coefficient; S: Blockage factor;
Vk: Water speed, Blockage factor (S)= b*T/B*H. b= Ship's Beam; T= Max. static draft;
B= Width of River/Canal/Sea inlet, or, 'Width of influence'. H= Depth of water.
If the width of river/canal/sea inlet, is greater than 'Width of Influence' (signifying 'open water'), then 'Width of Influence' is used as 'B' in the calculation of Blockage Factor. If the width of river/canal/sea inlet is left blank, then 'width of influence' will be used as 'B' by the formula, signifying 'open water'.

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Section 14 B. UKC CALCULATION (For least expected depth at Departure Port). Also calculate TIDAL WINDOW as per section 4, if applicable.

VESSEL	M T CELSIUS MALAGA		**DATE**	18.07.2018
Position (lat/long)	23°55.4"S 046°20"W		**Distance of shallow area (nm)**	2
PORT/AREA	SANTOS		**LOCAL TIME**	1256
Vessel Particulars and Drafts (Metres)			**Controlling Depth Calculation**	
			Unit for entering Charted Depth	**Metre**
DRAFTS	FORWARD	9.00	Charted depth, less depth reductions due to sandwaves, silting, underwater obstructions	10.00
	AFT	9.00	Effect of Tide (+/-) - **Metres only** Note 4	0.80
	MIDSHIPS (P)	9.00	Width **(nautical miles)** of River / Canal / Sea	0.200
	MIDSHIPS (S)	9.00	CATZOC - choose value A1, A2, B, C, D or	A1
			Depth inaccuracy of CATZOC	0.89
Density used for computing above drafts		1.013		
Heel (degrees) Note 1		0.00	**ACTUAL CONTROLLING DEPTH**	10.80
Increase in draft due to heel		0.00		
Incr. in draft due to pitch (metres) Note 2		0.05	**UNDER-KEEL CLEARANCE in Metres**	**1.64**
Incr. in draft due to heave (sea / swell)		0.05	**UNDER-KEEL CLEARANCE in Feet**	**5.37**
Block Coefficient for Corrected Mean		0.79		
Increase due to Squat (+) Note 3		0.06		
MAXIMUM DYNAMIC DRAFT		9.16	Width of influence [{(7.7+20*(1-Cb)^2}*	0.11214
Intended transit speed (KTS)		3.00	Width of River / Canal / Sea inlet less than	NO

Note 1: Heel is the maximum combined effect of any list plus roll plus heel due to alteration of course

Note 2: Increase in draft due to pitching motion may be derived from draft gauges or by reading angle of pitch from an inclinometer in the F/A plane (if fitted) or by estimating pitch angle, then using the formula: INCREASE IN DRAFT DUE TO PITCH = (LENGTH OVERALL) / 2 X SIN(PITCH ANGLE).

Note 3: Squat calculation used: $C_b*S^{0.81}*V_k^{2.08}/20$. C_b:Block coefficient; S: Blockage factor; V_k: Water speed.

Blockage factor (S)= b*T/B*H. b= Ship's Beam; T= Max. static draft; B= Width of River/Canal/Sea inlet, or, Width of influence'. H= Depth of water.
If the width of river/canal/sea inlet, is greater than 'Width of Influence' (signifying 'open water'), then Width of Influence' is used as 'B' in the calculation of Blockage Factor. If the width of river/canal/sea inlet is left blank, then 'width of influence' will be used as 'B' by the formula, signifying 'open water'.

Note 4: Check ENC sounding datum and confirm that it is the same as the datum used for tidal heights. If not, an adjustment will need to be made to the tidal height read from the tide tables.

WARNING! UKC IS NEGATIVE - NOT AUTHORISED TO PROCEED! CONDUCT RISK ASSESSMENT IN CONSULTATION WITH OFFICE.

PROCEED! CONDUCT RISK ASSESSMENT IN CONSULTATION WITH OFFICE.

WARNING! UKC IS INSUFFICIENT. CONDUCT RISK ASSESSMENT IN CONSULTATION WITH OFFICE.

Section 14 B. UKC CALCULATION (For least expected Port). *Also calculate TIDAL WINDOW as per section 4, if applicable.*

CATZOC WARNING! CONDUCT RISK ASSESSMENT IN CONSULTATION WITH OFFICE.

9.00 1

UKC reqd UKC-ZOC<min? UKC<0.5*draft?
1 1 1.04 y

YES
NO

9.00

0.112141 0.10487066

0.112140605

1 CONFINED
OPEN

0.062479716 5.372441878 0.372441878
0.0711

Meter
Feet

WARNING - UKC LOWER THAN MINIMUM REQUIRED IN SHALLOW WATERS AND MAY BE EVEN LOWER THAN SHOWN BELOW DUE TO DEPTH INACCURACY OF CATZOC (SEE ABOVE). **CONDUCT RISK ASSESSMENT IN CONSULTATION WITH OFFICE.**
CATZOC IS CATEGORY 'U' (ACCURACY NOT ASSESSED) OR CATZOC IS CATEGORY 'D' (WORSE THAN CATEGORY 'C') AND UKC IS LESS THAN 50% OF MAXIMUM STATIC DRAFT. CONDUCT RISK ASSESSMENT IN CONSULTATION WITH OFFICE.
WARNING - DUE TO DEPTH INACCURACY OF CATZOC (SEE ABOVE), UKC MAY BE INSUFFICIENT. CONDUCT RISK ASSESSMENT IN CONSULTATION WITH OFFICE.
INCORRECT CATZOC VALUE

A1
A2
B
C
D
U

WARNING: ENTER VESSEL'S BEAM IN 'GENERAL INFORMATION SECTION
WARNING: ENTER INTENDED TRANSIT SPEED (SPEED THROUGH WATER)
WARNING: ENTER CHARTED DEPTH
WARNING: ENTER BREADTH OF RIVER / CANAL / SEA INLET IF THIS IS LESS THAN 'WIDTH OF INFLUENCE' SHOWN BELOW
WARNING: ENTER BLOCK COEFFICIENT

Metre
Feet

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Section 14 C. UKC CALCULATION (For least expected depth between Departure and Arrival Port). Also calculate TIDAL WINDOW as per section 4, if applicable.

VESSEL	M T CELSIUS MALAGA	**DATE**	18.07.2017
Position (lat/long)	24*00*S 46*20*W	**Distance of shallow area (nm)**	0.1NM
PORT/ AREA	SANTOS PBG	**LOCAL TIME**	1200

Vessel Particulars and Drafts (Metres)			Controlling Depth Calculation	
DRAFTS	FORWARD	9.00	**Unit for entering Charted Depth**	**Metre**
	AFT	9.00	Charted depth, less depth reductions due to sandwaves, silting, underwater obstructions	13.50
	MIDSHIPS (P)	9.00	Effect of Tide (+/-) - **Metres only** [Note 4]	0.00
	MIDSHIPS (S)	9.00	Width **(nautical miles)** of River / Canal / Sea	2.000
			CATZOC - choose value A1, A2, B, C, D or	A1
			Depth inaccuracy of CATZOC	0.64
Density used for computing above drafts		1.013		
Heel (degrees) [Note1]		0.00	**ACTUAL CONTROLLING DEPTH**	13.50
Increase in draft due to heel		0.00		
Incr. in draft due to pitch (metres) [Note 2]		0.01	**UNDER-KEEL CLEARANCE in Metres**	**3.45**
Incr. in draft due to heave (sea / swell)		0.01	**UNDER-KEEL CLEARANCE in Feet**	**11.30**
Block Coefficient for Corrected Mean		0.79		
Increase due to Squat (+) [Note 3]		1.03		
MAXIMUM DYNAMIC DRAFT		10.05	Width of influence [{(7.7+20*(1-Cb)^2}*	0.1121
Intended transit speed (KTS)		13.00	Width of River / Canal / Sea inlet less than	NO

Note 1: Heel is the maximum combined effect of any list plus roll plus heel due to alteration of course

Note 2: Increase in draft due to pitching motion may be derived from draft gauges or by reading angle of pitch from an inclinometer in the F/A plane (if fitted) or by estimating pitch angle, then using the formula: INCREASE IN DRAFT DUE TO PITCH = (LENGTH OVERALL) / 2 X SIN(PITCH ANGLE).

Note 3: Squat calculation used: $C_b*S^{0.81}*V_k^{2.08}/20$. C_b:Block coefficient; S: Blockage factor; V_k: Water speed.

Blockage factor (S)= b*T/B*H. b= Ship's Beam; T= Max. static draft; B= Width of River/Canal/Sea inlet, or, Width of influence'. H= Depth of water.
If the width of river/canal/sea inlet, is greater than 'Width of Influence' (signifying 'open water'), then Width of Influence' is used as 'B' in the calculation of Blockage Factor. If the width of river/canal/sea inlet is left blank, then 'width of influence' will be used as 'B' by the formula, signifying 'open water'.

Note 4: Check ENC sounding datum and confirm that it is the same as the datum used for tidal heights. If not, an adjustment will need to be made to the tidal height read from the tide tables.

9.00

0.112141 0.07768197

1 CONFINED
OPEN

YES
NO

WARNING! UKC IS NEGATIVE - NOT AUTHORISED TO PROCEED! CONDUCT RISK ASSESSMENT IN CONSULTATION WITH OFFICE.

CATZOC WARNING! CONDUCT RISK ASSESSMENT IN CONSULTATION WITH OFFICE.

WARNING - UKC LOWER THAN MINIMUM REQUIRED IN SHALLOW WATERS AND MAY BE EVEN LOWER THAN SHOWN BELOW DUE TO DEPTH INACCURACY OF CATZOC (SEE ABOVE). **CONDUCT RISK ASSESSMENT IN CONSULTATION WITH OFFICE.**
CATZOC IS CATEGORY 'U' (ACCURACY NOT ASSESSED) OR CATZOC IS CATEGORY 'D' (WORSE THAN CATEGORY 'C') AND UKC IS LESS THAN 50% OF MAXIMUM STATIC DRAFT. CONDUCT RISK ASSESSMENT IN CONSULTATION WITH OFFICE.
WARNING - DUE TO DEPTH INACCURACY OF CATZOC (SEE ABOVE), UKC MAY BE INSUFFICIENT. CONDUCT RISK ASSESSMENT IN CONSULTATION WITH OFFICE.
INCORRECT CATZOC VALUE

A1
A2
B
C
D
U

WARNING: ENTER VESSEL'S BEAM IN 'GENERAL INFORMATION SECTION
WARNING: ENTER INTENDED TRANSIT SPEED (SPEED THROUGH WATER)
WARNING: ENTER CHARTED DEPTH
WARNING: ENTER BREADTH OF RIVER / CANAL / SEA INLET, IF THIS IS LESS THAN THE 'WIDTH OF INFLUENCE' SHOWN BELOW.
WARNING: ENTER BLOCK COEFFICIENT

Metre
Feet

UKC reqd UKC-ZOC<min? UKC<0.5*draft?
1 1 2.81 y

0.112140605

1.034567081
1.3351

11.30391378 0.303913777

Meter
Feet

WARNING! UKC IS ZERO - NOT AUTHORISED TO PROCEED! CONDUCT RISK ASSESSMENT IN CONSULTATION WITH OFFICE.

WARNING! UKC IS INSUFFICIENT. CONDUCT RISK ASSESSMENT IN CONSULTATION WITH OFFICE.

9.00 1

Section 14 C. UKC CALCULATION (For least expected **Departure and Arrival Port).** *Also calculate TIDAL WINDOW as*

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CATZOC WARNING! CONDUCT RISK ASSESSMENT IN CONSULTATION WITH OFFICE.

VESSEL	M T CELSIUS MALAGA	**DATE**	14.07.2018
Position (lat/long)		**Distance of shallow area (nm)**	0.2
PORT/ AREA		**LOCAL TIME**	2100

Vessel Particulars and Drafts (Metres)			**Controlling Depth Calculation**	
DRAFTS	FORWARD	9.00	**Unit for entering Charted Depth**	**Metre**
	AFT	9.00	Charted depth, rate depth reductions due to sandwaves, silting, underwater obstructions	11.20
	MIDSHIPS (P)	9.00	Effect of Tide (+/-) - **Metres only** Note 4	0.00
	MIDSHIPS (S)	9.00	Width **(nautical miles)** of River / Canal / Sea	0.500
			CATZOC - choose value A1, A2, B, C, D or	U
			Depth inaccuracy of CATZOC	Unkno wn
Density used for computing above drafts		1.025	*WARNING! CATZOC IS CATEGORY 'U' (ACCURACY NOT ASSESSED) OR CATZOC IS CATEGORY 'D' (WORSE THAN CATEGORY 'C') AND UKC IS LESS THAN 50% OF MAXIMUM STATIC DRAFT. CONDUCT RISK ASSESSMENT IN CONSULTATION WITH OFFICE.*	
Heel (degrees) Note1		0.00	**ACTUAL CONTROLLING DEPTH**	11.20
Increase in draft due to heel		0.00		
Incr. in draft due to pitch (metres) Note 2		0.01	**UNDER-KEEL CLEARANCE in Metres**	**2.16**
Incr. in draft due to heave (sea / swell)		0.01	**UNDER-KEEL CLEARANCE in Feet**	**7.07**
Block Coefficient for Corrected Mean		0.70		
Increase due to Squat (+) Note 3		0.02		
MAXIMUM DYNAMIC DRAFT		9.04	Width of influence {((7.7*20*(1-Cb)^2)^0.5}	0.1125
Intended transit speed (KTS)		2.00	Width of River / Canal / Sea inlet less than	NO

Note 1: Heel is the maximum combined effect of any list plus roll plus heel due to alteration of course

Note 2: Increase in draft due to pitching motion maybe derived from draft gauges or by reading angle of pitch from an inclinometer in the F/A plane (if fitted) or by estimating pitch angle, then using the formula: INCREASE IN DRAFT DUE TO PITCH = (LENGTH OVERALL) / 2 X SIN(PITCH ANGLE).

Note 3: Squat calculation used: $C_B * S^{0.81} * V_K^{2.08} / 20$. C_B Block coefficient, S: Blockage factor, V_K Water speed.

Blockage factor (S)= b*T/B*H. b= Ship's Beam, T= Max. static draft, B= Width of River/Canal/Sea inlet, or, Width of influence', H= Depth of water.
If the width of river/canal/sea inlet, is greater than 'Width of Influence' (signifying 'open water'), then Width of Influence' is used as 'B' in the calculation of Blockage Factor. If the width of river/canal/sea inlet is left blank, then 'width of influence' will be used as 'B' by the formula, signifying "open water".

Note 4: Check ENC sounding datum and confirm that it is the same as the datum used for tidal heights. If not, an adjustment will need to be made to the tidal height read from the tide tables.

WARNING! UKC IS NEGATIVE - NOT AUTHORISED TO PROCEED! CONDUCT RISK ASSESSMENT IN CONSULTATION WITH OFFICE

CATZOC WARNING! CONDUCT RISK ASSESSMENT IN CONSULTATION WITH OFFICE

PROCEED! CONDUCT RISK ASSESSMENT IN CONSULTATION WITH OFFICE

WARNING! UKC IS INSUFFICIENT. CONDUCT RISK ASSESSMENT IN CONSULTATION WITH OFFICE

Section 14 D. UKC CALCULATION (For least expected Port). *Also calculate TIDAL WINDOW as per section 4, if applicable.*

9.00 1

UKC reqd 1.1 | UKC-ZOC<min? y | UKC<0.5*draft?

YES
NO

9.00

0.112472 0.093358424

0.112472244

1 CONFINED
OPEN

0.024373139
0.03148

7.072266603 0.072266603

Meter
Feet

WARNING - UKC LOWER THAN MINIMUM REQUIRED IN SHALLOW WATERS AND MAY BE EVEN LOWER THAN SHOWN BELOW DUE TO DEPTH INACCURACY OF CATZOC (SEE ABOVE). **CONDUCT RISK ASSESSMENT IN CONSULTATION WITH OFFICE.**
WARNING - CATZOC IS CATEGORY 'U' (ACCURACY NOT ASSESSED) OR CATZOC IS CATEGORY 'D' (WORSE THAN CATEGORY 'C') AND UKC IS LESS THAN 50% OF MAXIMUM STATIC DRAFT. CONDUCT RISK ASSESSMENT IN CONSULTATION WITH OFFICE.
WARNING - DUE TO DEPTH INACCURACY OF CATZOC (SEE ABOVE), UKC MAY BE INSUFFICIENT. CONDUCT RISK ASSESSMENT IN CONSULTATION WITH OFFICE.
INCORRECT CATZOC VALUE

A1
A2
B
C
D
U

WARNING: ENTER VESSEL'S BEAM IN 'GENERAL INFORMATION SECTION
WARNING: ENTER INTENDED TRANSIT SPEED (SPEED THROUGH WATER)
WARNING: ENTER CHARTED DEPTH
WARNING: ENTER BREADTH OF RIVER / CANAL / SEA INLET, IF THIS IS LESS THAN THE 'WIDTH OF INFLUENCE' SHOWN BELOW.
WARNING: ENTER BLOCK COEFFICIENT

Metre
Feet

SQUAT CALCULATION (Short-cut formulae)

VESSEL M T CELSIUS MALAGA

BLOCK COEFFICIENT 0.790

Note: Increase in draft forward or aft due to squat effect could be more

The values below were calculated using the short-cut formulae. A

OPEN WATERS		CONFINED WATERS	
SPEED	SQUAT	SPEED	SQUAT
knots	meters	knots	meters
3	0.07	3	0.14
4	0.13	4	0.25
5	0.20	5	0.40
6	0.28	6	0.57
7	0.39	7	0.77
8	0.51	8	1.01
9	0.64	9	1.28
10	0.79	10	1.58
11	0.96	11	1.91
12	1.14	12	2.28
13	1.34	13	2.67
14	1.55	14	3.10
15	1.78	15	3.56
16	2.02	16	4.04
17	2.28	17	4.57
18	2.56	18	5.12
19	2.85	19	5.70
20	3.16	20	6.32
21	3.48	21	6.97
22	3.82	22	7.65
23	4.18	23	8.36
24	4.55	24	9.10
25	4.94	25	9.88

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Section 14 F(1). OVERHEAD CLEARANCE CALCULATION

VESSEL	MT CELSIUS MALAGA	**DATE**	19.07.2018
Position (lat/long)	23°57.1' S 046°18.4'W	**Distance of shallow area (nm)**	0.5NM
PORT/ AREA	SANTOS PILOTAGE	**LOCAL TIME**	2100

Vessel Particulars (Metres)			Overhead clearance Calculation		
DRAFTS	FORWARD	9.00	Select Unit for entering Charted Height	Metre	
	AFT	9.00	Charted height (overhead clearance) of obstruction	82.00	T
Length Between Perpendiculars (metres)		141.000	Tidal height (+/-) - **Metres only**	2.00	0
Horizontal Distance of Highest Point		39.22	Distance (Metres only) between plane used	2.00	
					KTM
AIR DRAFT (metres), corrected for Trim		30.22	**OVERHEAD CLEARANCE (Metres)**	**51.78**	

Note 1: The plane used for tidal heights is usually the same as the chart (sounding) datum, which is difference in height between these planes should be entered and is automatically added to the charted

WARNING! OVERHEAD CLEARANCE IS INSUFFICIENT - CONDUCT RISK ASSESSMENT IN CONSULTATION WITH OFFICE.

ENTER TIDAL HEIGHT

ENTER CORRECT DISTANCE OF HIGHEST POINT FROM AFT PERPENDICULAR.

ENTER DISTANCE BETWEEN PLANES FOR SOUNDINGS AND

ENTER LENGTH BETWEEN PERPENDICULARS.

ENTER MAX HEIGHT ABOVE KEEL IN 'GENERAL INFORMATION'.

Section 14 B. UKC CALCULATION (For least expected depth at Departure Port).
Also calculate TIDAL WINDOW as per section 4, if applicable.

ENTER CHARTED HEIGHT (OVERHEAD CLEARANCE) OF

L
141.000 YES
D NO
39.22
141 30.22
30.22 82 2 2.00 82.00 51.78

Mean High Water (MHW)
Mean Higher High Water (MHHW)
Mean Sea Level (MSL)
Highest Astronomical Tide (HAT)

Feet
Metre

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Section 14 F(2). OVERHEAD CLEARANCE CALCULATION

VESSEL	M T CELSIUS MALAGA	**DATE**	
Position (lat/long)		**Distance of shallow area (nm)**	
PORT/ AREA		**LOCAL TIME**	

Vessel Particulars (Metres)			Overhead clearance Calculation		
DRAFTS	FORWARD		Select Unit for entering Charted Height	Metre	T L
	AFT		Charted height (overhead clearance) of obstruction		0.000 YES
Length Between Perpendiculars (metres)			Tidal height (+/-) - **Metres only**		KTM D NO
Horizontal Distance of Highest Point			Distance (Metres only) between plane used		39.22 0.00
AIR DRAFT (metres), corrected for Trim			**OVERHEAD CLEARANCE (Metres)**		#VALUE! #######

Note 1: The plane used for tidal heights is usually the same as the chart (sounding) datum, which is difference in height between these planes should be entered and is automatically added to the charted

WARNING! OVERHEAD CLEARANCE IS INSUFFICIENT - CONDUCT RISK ASSESSMENT IN CONSULTATION WITH OFFICE.

ENTER TIDAL HEIGHT

ENTER CORRECT DISTANCE OF HIGHEST POINT FROM AFT PERPENDICULAR.

ENTER DISTANCE BETWEEN PLANES FOR SOUNDINGS AND

ENTER LENGTH BETWEEN PERPENDICULARS.

ENTER MAX HEIGHT ABOVE KEEL IN 'GENERAL INFORMATION'.

Section 14 B. UKC CALCULATION (For least expected depth at Departure Port).
Also calculate TIDAL WINDOW as per section 4, if applicable.

ENTER CHARTED HEIGHT (OVERHEAD CLEARANCE) OF

0 0.00 0.00

Mean High Water (MHW)
Mean Higher High Water (MHHW)
Mean Sea Level (MSL)
Highest Astronomical Tide (HAT)

Feet
Metre

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Section 15: Master's review of passage plan

M.V/M.T M T CELSIUS MALAGA **Voyage No:** 26

Dep Port: SANTOS **Arr. Port:** HOUSTON

	YES	NO	N/A
Section - 1 General information			
Has all relevant information been filled up in the Set up Page ?			
Section - 2 Nautical Charts / ENCs			
Are all charts on board for the passage and are the largest scale charts in use ?			
Has all relevant information including below been filled in for each chart/ENC being used, wherever applicable			
Parallel Index lines and distances when coasting			
Contingency Anchorage			
Clearing lines and bearings, heading marks, leading lines			
No-go areas (mainly for dangers close to the track)			
Wheel-over positions			
Boundary of Special Areas (SECA/ECA/China Str BL/Right Whale etc)			
Abort point (should NOT be marked before Pilot Station)			
Areas of significant tides/currents/eddies/low UKC			
RADAR conspicuous points, landfall targets and lights			
VTS / Port Control / Pilot station reporting points			
Locations of speed reduction or voyage legs where speed must be limited.			
Areas where two steering motors are required to be switched ON			
Areas where echo sounder should be activated			
Crossing and high density traffic areas			
Call Points' for Master			
Notices to Engine Room			
Manning of Engine Room (UMS Vessels)			
Has a proper 'Abort Point' been marked ? Indicate position: _____			
Has the 'Shallow Water Effect' and 'Banking Effect' been considered ?			
Voyage Charts/ENCs corrected to NTM/Week no. 28/18			
Has the designated Pilot Boarding Ground been assessed and found suitable for the manoeuvering characteristics of the vessel ?			
If NO, has an alternate location been identified? Indicate posn: NA			
Section - 3 Publications			
Have all required Publications been identified and relevant information filled in section 3 ? Voyage Publications corrected to NTM week no. 28/18			
Has relevant information been extracted from required publications ?			
Section - 4 Tides & current			
Is all relevant information regarding tides & currents provided in section 4 ?			
Section - 5 Weather conditions			
Has the advice from Weather routeing agencies been applied ?			
Section - 6 Reporting details			
Is all relevant reporting information as listed in section 6 kept ready for use.?			
Vessels calling/ Departing US ports, duly signed copies of completed passage will be send to office on email ID fleet-ccmnav@fleetship.com ?			

	YES	NO	N/A
Section - 7 Bridge team management Has watch schedule/ manning requirements as per Bridge Team Management been discussed with all Navigating officers and Understood ?			
Section - 8 ISPS requirements Has the ISPS Section fully filled in and required precautions taken ?			
Section - 9 Environment requirements Have all Country and State-specific environmental requirements in this section been read, understood and implemented?			
Section - 10 Contingencies Have all contingencies measures been discussed with the bridge team ?			
Section - 11 Departure port- Waypoints Has the Departure port way point list filled in ?			
What is the Minimum expected UKC 1.6 MTRS			
Are any navigation risk assessments required to be carried out during this leg ? (Note: Refer to BPM Section 3.2.3.1 for further details).			
Section - 12 Sea passage- Waypoints Has the Sea passage way point list filled in ?			
Has a longer route been taken in preference to shorter more hazardous route ?			
Section - 13 Arrival port- Waypoints Has the arrival port way point list filled in ?			
What is the Minimum expected UKC			
Are any navigation risk assessments required to be carried out during this leg ? (Note: Refer to BPM Section 3.2.3.1 for further details).			
Section - 14 UKC and overhead clearance calculations Are UKC and overhead clearance calculated as per bridge procedures?			

Signature _____ **Master's Name** P.S.RATHORE

Date _____ **Time** _____

We undersigned hereby confirm understanding & compliance with above passage plan

Name	Rank	Date/Time	Signature
	Chief officer		
JANAPALA BHARGAV	Second officer		
YADVENDRA SINGH HADA	Third officer		
AMANDEEP CHAHAL	ADD THIRD OFF		

Section 16: Last Minute Changes to Passage Plan:

Note: Changes to planned way-points or other components of the passage plan, when there is insufficient time to change the plan, may be recorded below. An example is when the Master agrees with the Pilot's recommendation to change the route planned by the vessel. All changes must be discussed with the Bridge team and the track plotted on ENC / chart suitably amended to allow the changed plan to be effectively monitored by the Bridge team.

DATE AND TIME OF CHANGE	DESCRIPTION / PASSAGE PLAN SECTIONS TO WHICH CHANGES APPLY	WAY-POINTS / OTHER CONTENTS OF PLAN BEFORE THE CHANGE	NEW WAY-POINTS / OTHER CONTENTS AFTER CHANGE

Prepared _____
(Master)

Above changes have been discussed and understood by:

1. Name: _____ ; Rank: _____
2. Name: _____ ; Rank: _____
3. Name: _____ ; Rank: _____
4. Name: _____ ; Rank: _____

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Section 17: Post Voyage De-Brief of Passage Plan

M.V/M.T M T CELSIUS MALAGA **Voyage No:**

From (Port of Departure): **To (Port of Arrival)**

After completion of this passage, the master should take the opportunity to discuss the planning and execution of the passage Such a de brief need not take long, and can take place during the passage whilst the memory is still fresh in people's minds.

	YES	NO	N/A
1. Were charts and publications suitable for the voyage ?			

Remarks (if any):

2. Has the VOYAGE LOG and any user maps / settings used for this voyage been exported to and saved on a CD?

The VOYAGE LOG / other name used by the ECDIS and any user maps and settings (that can be exported) used for the completed voyage, should be saved for record purposes on a CD / DVD and filed along with this passage plan.

3. Was the bridge team composition adequate or were any changes required ?

Remarks (if any):

4. Were any amendments required to the departure port way-point sheet (Section 11) ?

Remarks (if any):

5. Were any amendments required to the arrival port way-point sheet (Section 13A) ?

Remarks (if any):

6. a) Was the UKC experienced during the passage as calculated in the passage plan ?

b) Enter any significant difference between the UKC at the berth(s) / on psg and the expected UKC as per calculation. *Least UKC on psg / Berth:* *least UKC calculated:*

Remarks (if any):

7. Was the position checking interval stated in the passage plan adequate/ difficult to comply with ?

Remarks (if any):

8. List 'Note worthy efforts' (for example by members of the bridge team, during the various stages of the plan etc.

9. List the scope for improvement in future passage plans:

Master	PS.RATHORE	**Sign**	
Ch/ Off	SAIFUL ISLAM	**Sign**	
2/ Off	J BHARGAV	**Sign**	
3/ Off	Y.S.HADA	**Sign**	
Addnl Off	AMANDEEP CHAHAL	**Sign**	
Date	3/7/2018	**Time**	